

Wednesday, January 29, 2025  
Time of Issue: 1330 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems, Forecast and warning:

- ❖ The **Western disturbance** seen as a cyclonic circulation over West Afghanistan in lower tropospheric levels. Two fresh **Western Disturbances** are likely to affect Northwest India between 01<sup>st</sup> to 04<sup>th</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 29<sup>th</sup> January- 04<sup>th</sup> February; isolated to scattered rainfall/snowfall over Himachal Pradesh during 29<sup>th</sup> January-04<sup>th</sup> February, Uttarakhand on 29<sup>th</sup> January and 01<sup>st</sup> February and isolated to scattered light to moderate rainfall over Punjab, Haryana, West Uttar Pradesh during 31<sup>st</sup> January-04<sup>th</sup> February, East Rajasthan, Vidarbha during 02<sup>nd</sup> -04<sup>th</sup>, Madhya Pradesh and Chhattisgarh on 03<sup>rd</sup> & 04<sup>th</sup> February, 2025.
- ❖ A **cyclonic circulation** lies over northeast Assam in lower tropospheric levels. Under its influence,
  - ✓ Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Arunachal Pradesh and Assam & Meghalaya during 29<sup>th</sup>-31<sup>st</sup> January.
  - ✓ Isolated light to moderate rainfall likely over Sub-Himalayan West Bengal & Sikkim during 29<sup>th</sup>-31<sup>st</sup> January.
  - ✓ **Heavy rainfall/snowfall** likely over Arunachal Pradesh on 30<sup>th</sup> January.
- ❖ Under the influence of an easterly wave, Light to moderate rainfall accompanied with thunderstorm & lightning very likely at a few places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during 29<sup>th</sup> January - 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 and Fog Forecast:

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

- ❖ Minimum temperatures are **4-10°C** over many parts of plains of Northwest India & adjoining Uttarakhand, East Madhya Pradesh, Chhattisgarh and Jharkhand; **10-18°C** in many parts of Rajasthan, West Madhya Pradesh, East & West India. Today, the lowest minimum temperature of **4.8°C** is reported at **Narnaul (Haryana)** 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 Sub-Himalayan West Bengal & Sikkim and Saurashtra & Kutch and **rise by 2-4°C** in many parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, East Rajasthan, north Madhya Pradesh and West Uttar Pradesh and **1-3°C** in some parts of, Chhattisgarh, Odisha and major parts of south peninsular India.

##### Forecast of temperature:

- ❖ Gradual rise in minimum temperatures by 2-3°C likely over Northwest India during next 5 days and no significant change thereafter.
- ❖ Rise in minimum temperatures by 2-4°C likely over Central and East India during next 3 days and no significant change thereafter.
- ❖ No significant change in minimum temperatures likely over rest parts of the country.

##### 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 Gangetic West Bengal till 30<sup>th</sup> January; coastal Odisha till 31<sup>st</sup>; Sub-Himalayan West Bengal & Sikkim and Bihar till 01<sup>st</sup> February and over Assam & Meghalaya during 31<sup>st</sup> January-03<sup>rd</sup> February, 2025.

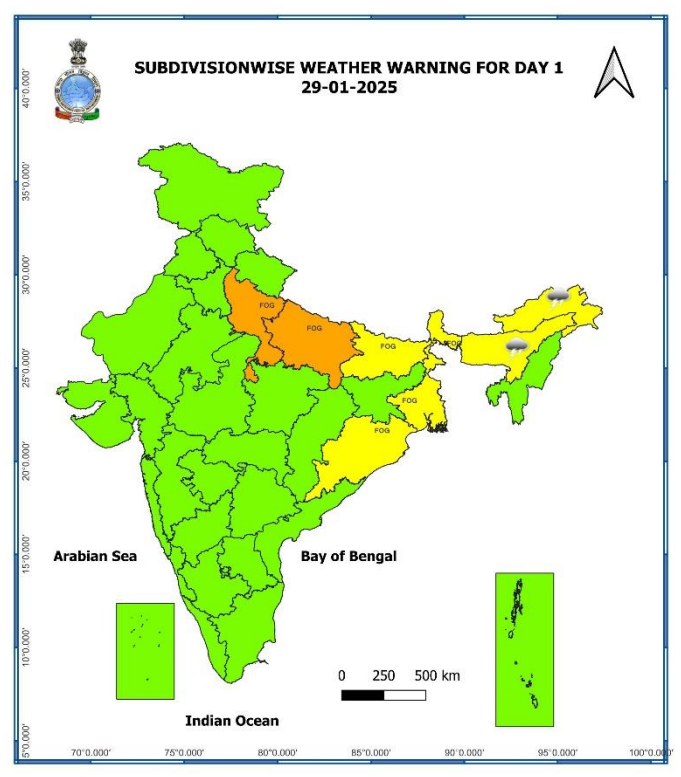
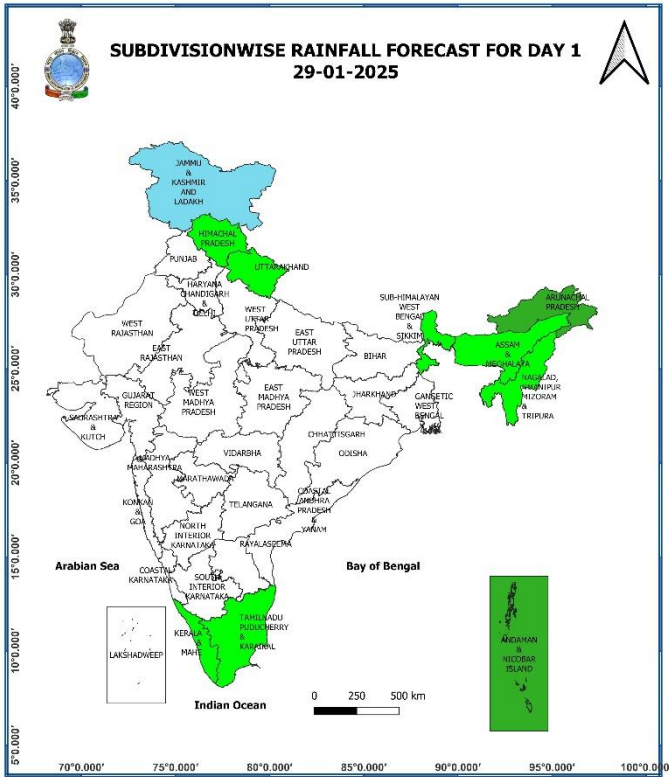
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at many places** over Andaman & Nicobar Islands; **at isolated places** over East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): **Andaman & Nicobar Islands:** Car Nicobar (dist Nicobar) 2, **Arunachal Pradesh:** Ziro (dist Lower Subansiri) 1; **Assam & Meghalaya:** Goibargaon (dist Baksa) 1; **Nagaland, Manipur, Mizoram & Tripura:** Kiphire (dist Kiphire) 1, Kiphire\_ Aws (dist Kiphire) 1
- ❖ **Fog reported** (upto 0830 hours IST of today): **Dense to very dense fog conditions** in isolated pockets of Uttar Pradesh, Bihar, Odisha and Meghalaya.
- ❖ **Visibility reported** (upto 0830 hours IST of today) ( $\leq 200$  m): **East Uttar Pradesh:** Ayodhya, Kushinagar 0 each; **Odisha:** Angul 0; **West Uttar Pradesh:** Meerut 20; **Bihar:** Purnia 25; **Meghalaya:** Barapani 25
- ❖ **Cold Wave conditions** prevailed in isolated pockets of Himachal Pradesh.
- ❖ **Minimum Temperature Departures (as on 29-01-2025):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at some places over East Rajasthan and Madhya Maharashtra; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Saurashtra & Kutch, West Madhya Pradesh, Marathwada, Vidarbha, Assam & Meghalaya, Telangana, Andaman & Nicobar Islands; **above normal (1.6°C to 3.0°C)** at many places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Haryana, Bihar, Gangetic West Bengal, West Rajasthan, Jharkhand, Gujarat Region. These are **below normal (-1.6°C to -3.0°C)** at many places over Delhi; at isolated places over East Madhya Pradesh, Konkan & Goa, Rayalaseema and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature** of 4.8°C is reported at **Narnaul (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 28-01-2025):** 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 a few places over Punjab, Vidarbha, Gujarat state; at isolated places West Rajasthan, Uttarakhand, Konkan & Goa, Madhya Maharashtra, Marathwada, Chhattisgarh and Odisha ; **above normal (1.6°C to 3.0°C)** at a few places over East Rajasthan, Telangana, North Interior Karnataka; at isolated places over Delhi, Uttar Pradesh, Madhya Pradesh, West Bengal & Sikkim and near normal over rest parts of the country (**Fig. 2**). Yesterday, the **highest maximum temperature** of 35.8°C was reported at **Punalur (Kerala & Mahe) & Solapur (Madhya Maharashtra)** over the plains of the country.

## Meteorological Analysis (Based on 0830 hours IST)

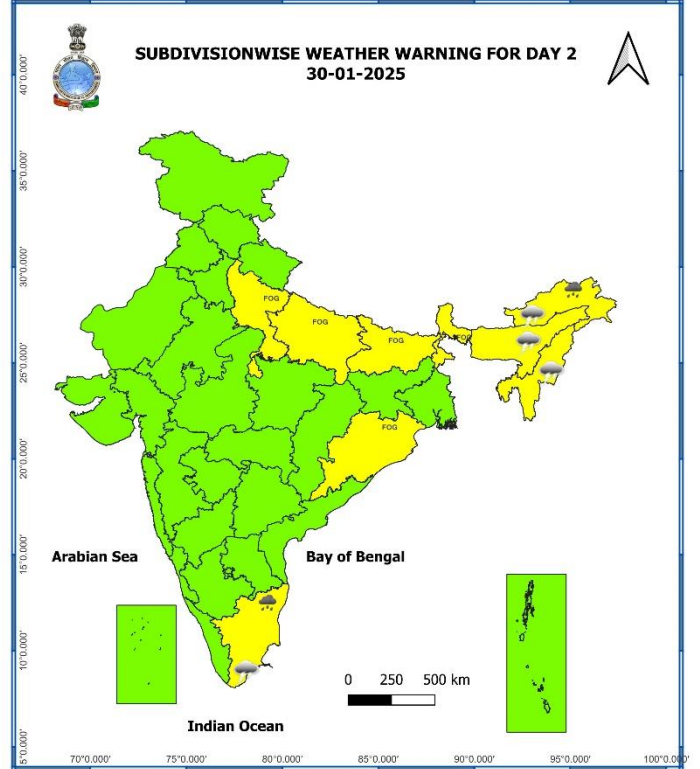
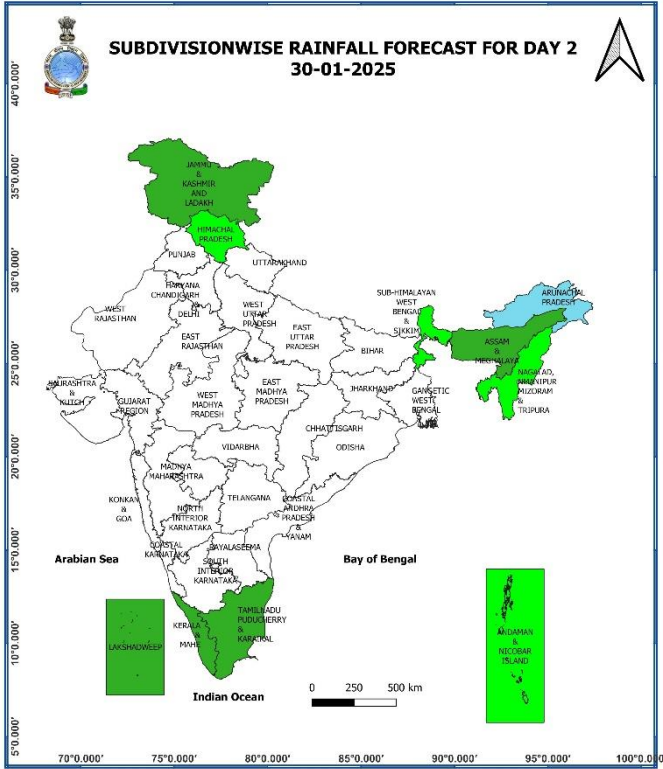
- ❖ The **Western Disturbance** as a cyclonic circulation over West Afghanistan & neighbourhood persists and now lies at 3.1 km above mean sea level with a trough aloft in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 62°E to the north of Lat. 30°N.
- ❖ A **cyclonic circulation** lies over South Haryana & neighbourhood at 1.5 km above mean sea level.
- ❖ The **cyclonic circulation** over East Bangladesh & neighbourhood now lies over northeast Assam & neighbourhood between 1.5 km & 3.1 km above mean sea level.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 150 knots at 12.6 km above mean sea level is prevailing over Northwest India.
- ❖ Two fresh **Western Disturbances** are likely to affect Northwest India during 01<sup>st</sup> & 03<sup>rd</sup> February, 2025.

**Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 05<sup>th</sup> February, 2025)**



**29<sup>th</sup> January (Day 1):**

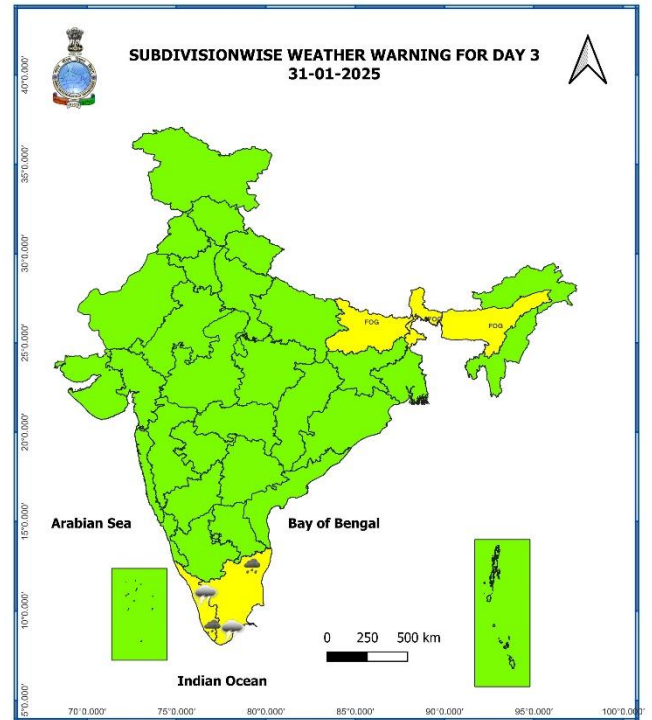
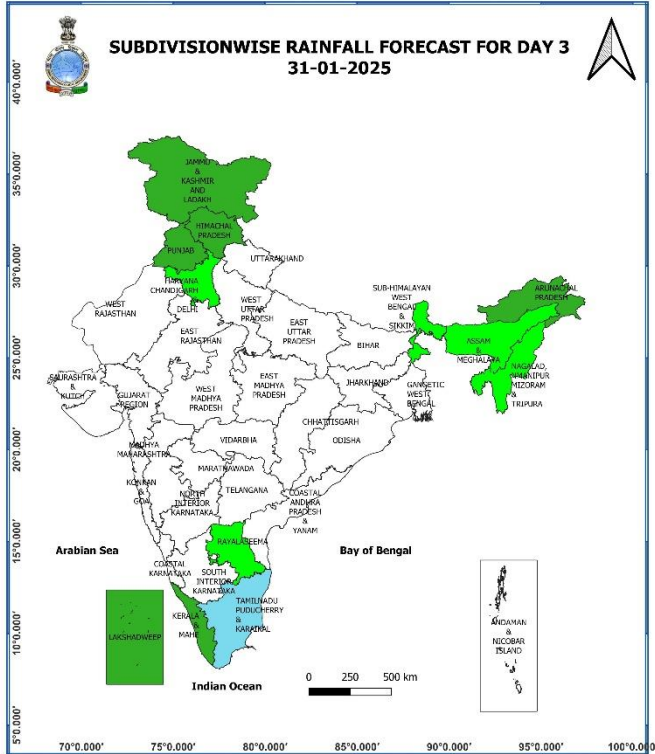
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Uttar Pradesh and **dense fog conditions** in isolated pockets of West Bengal & Sikkim, Bihar and Odisha.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.



### 30<sup>th</sup> January (Day 2):

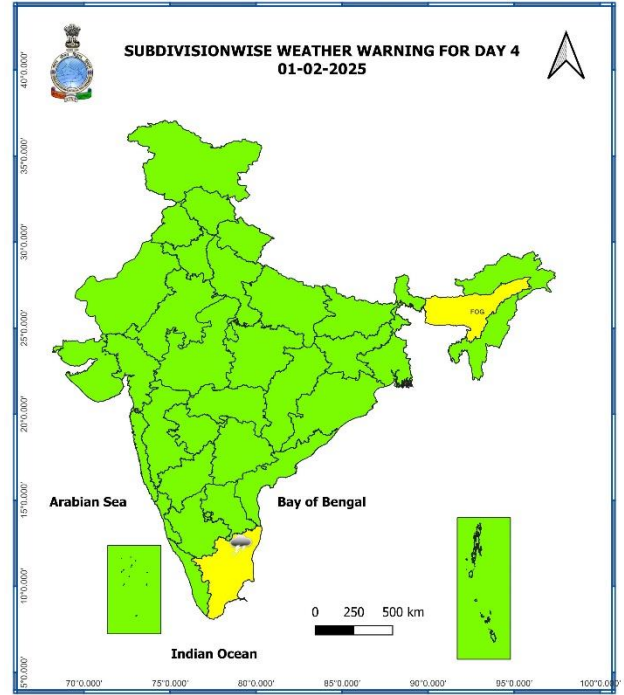
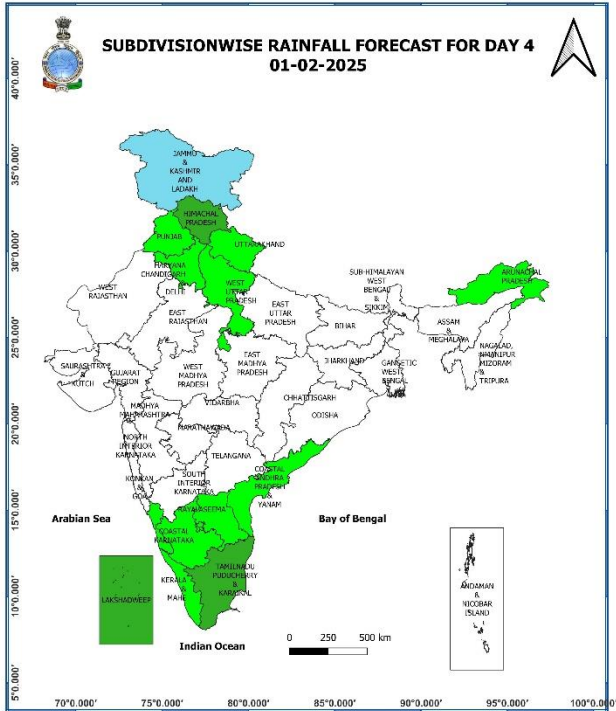
- ❖ **Dense fog conditions** very likely in isolated pockets of Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar and Odisha.
- ❖ **Heavy Rainfall/snowfall** very likely at isolated places over Arunachal Pradesh; **Heavy Rainfall** at isolated places Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm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





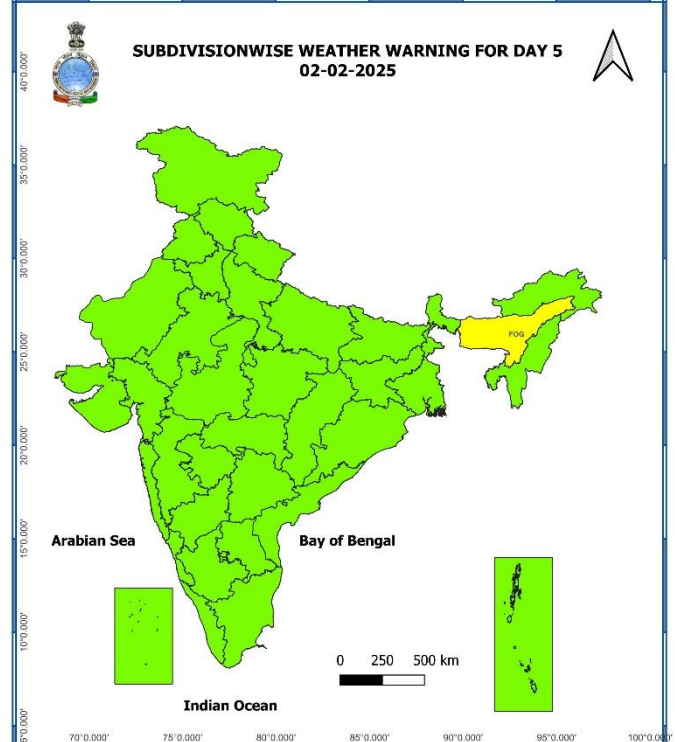
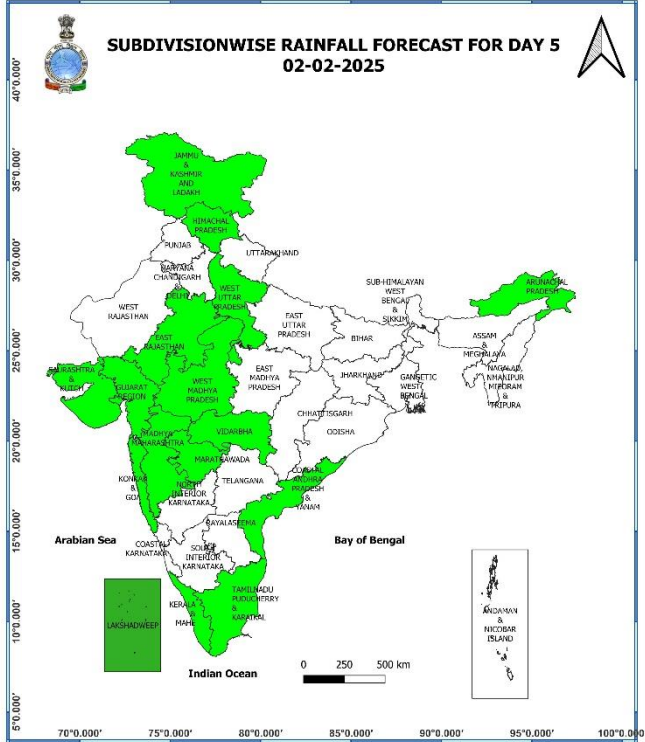
### 31<sup>st</sup> January (Day 3):

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



### 01<sup>st</sup> February (Day 4):

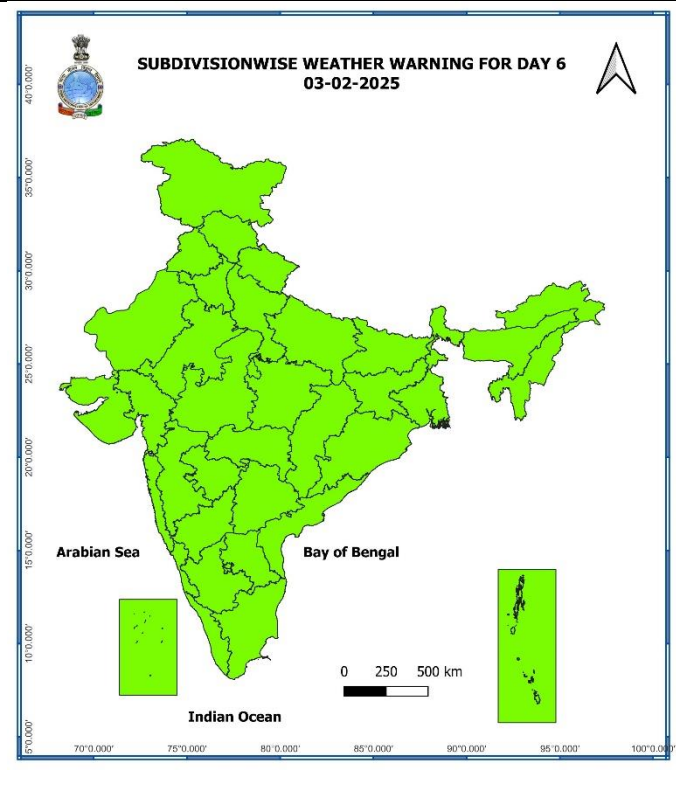
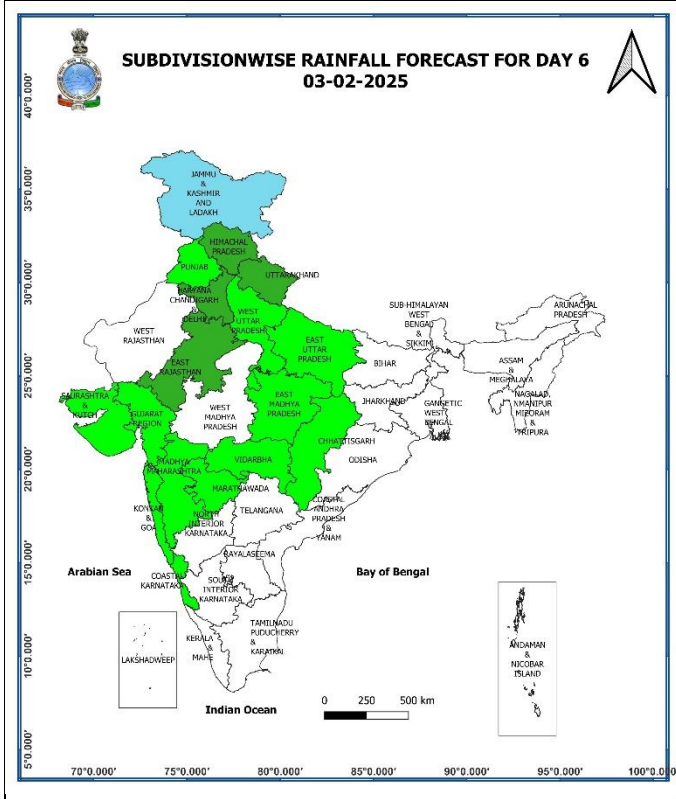
- ❖ **Dense fog conditions** likely in isolated pockets of Assam & Meghalaya.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.



**02<sup>nd</sup> February (Day 5):**

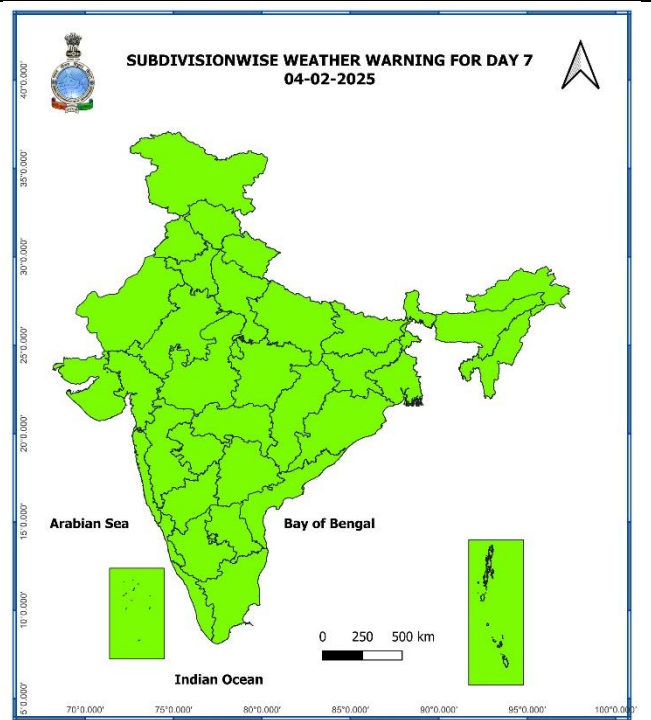
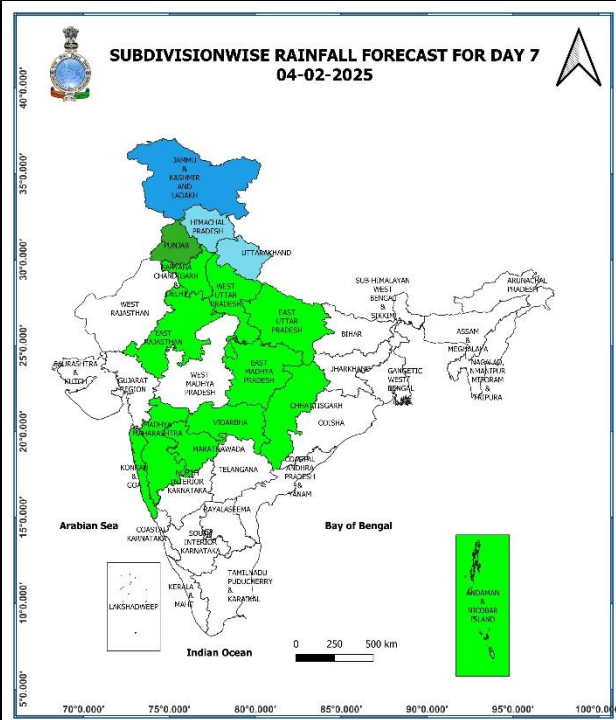
- ❖ **Dense fog conditions** likely in isolated pockets of Assam & Meghalaya.





**03<sup>rd</sup> February (Day 6):**

❖ **No Weather Warning.**



**04<sup>th</sup> February (Day 7):**

❖ **No Weather Warning.**

**Weather Outlook for subsequent 3 days (During 05<sup>th</sup> February- 07<sup>th</sup> February, 2025)**

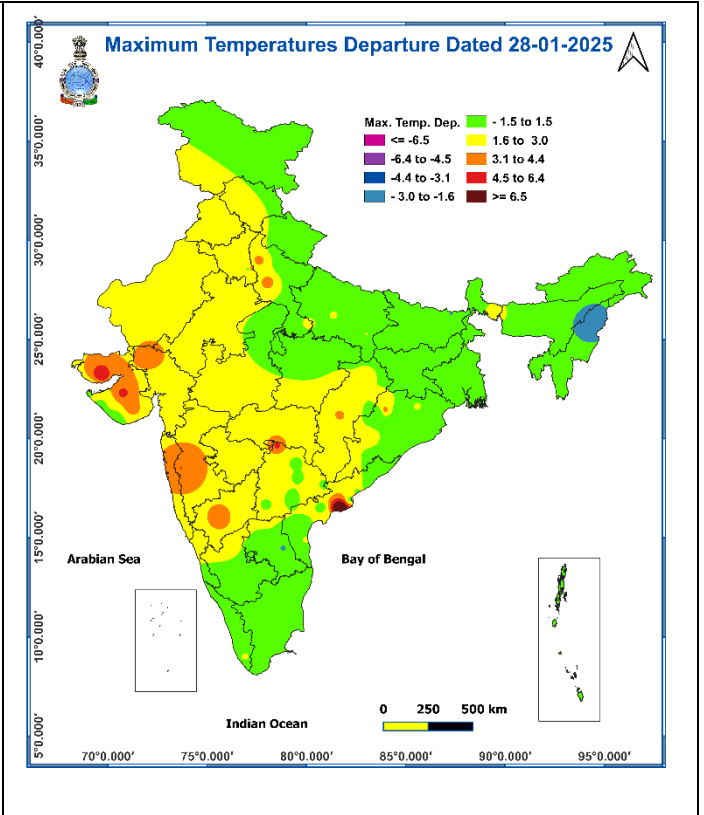
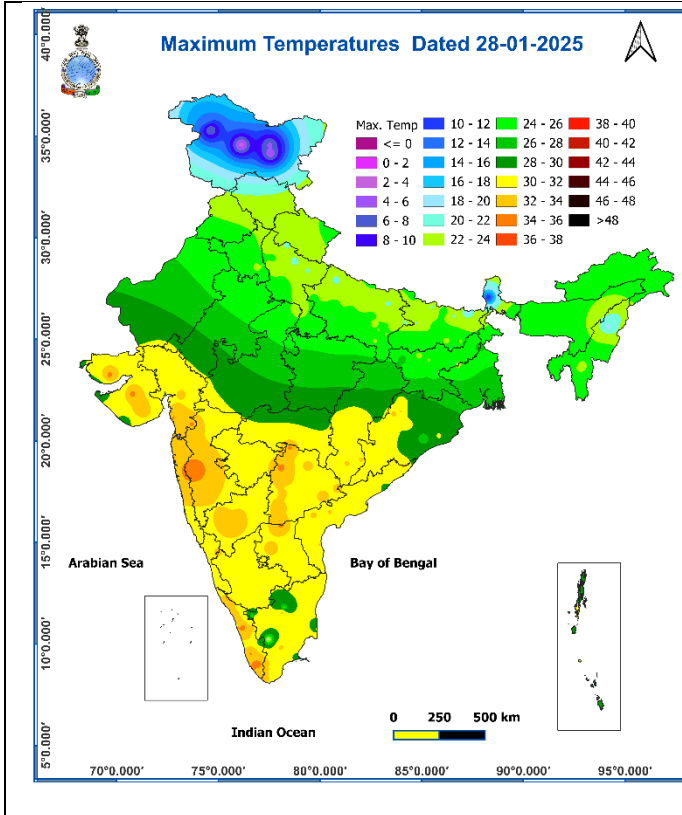
❖ **Isolated to scattered rainfall likely** over western Himalayan region, Uttar Pradesh, adjoining Central India, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep and Andaman & Nicobar Islands.

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.

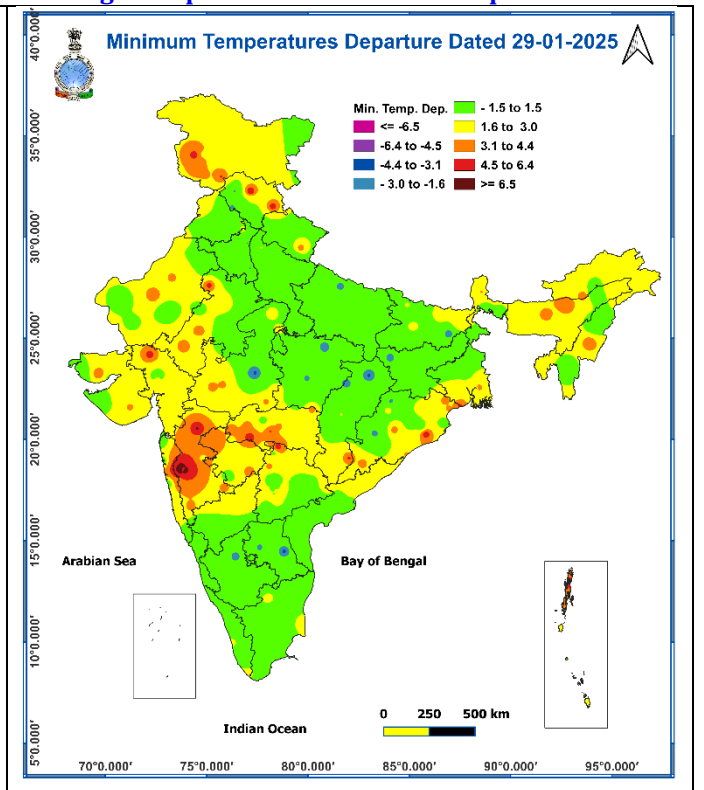
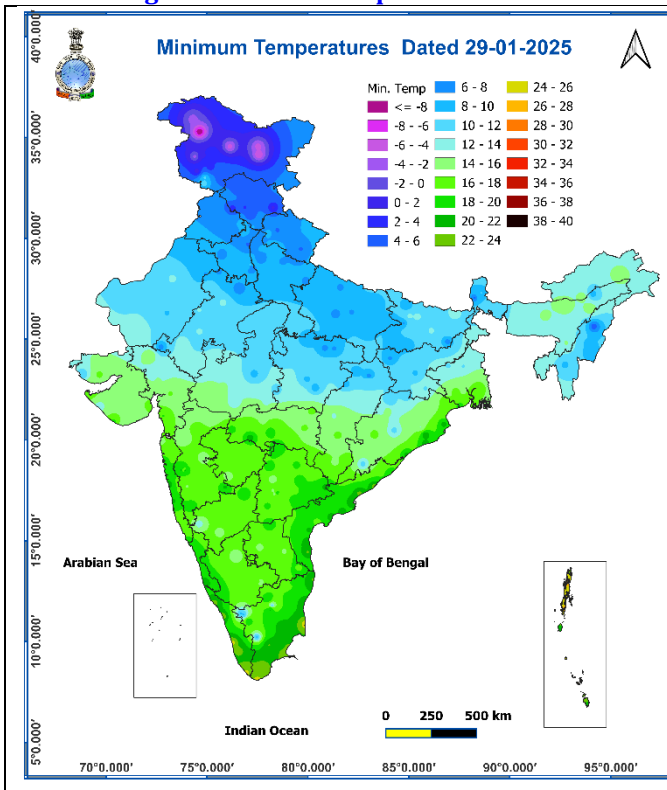
**Fig. 1: Maximum Temperatures**

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



**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:

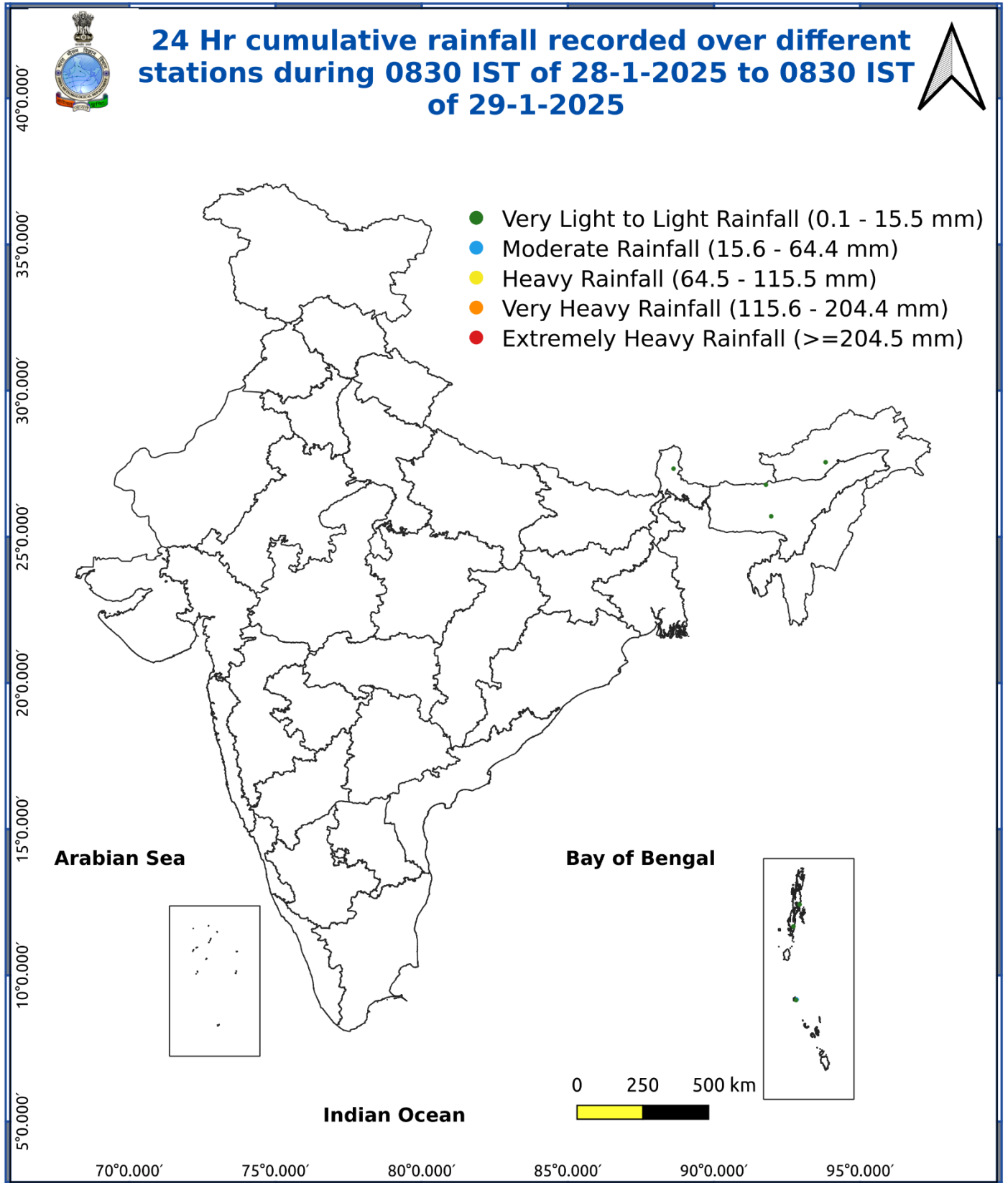
- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

### Agromet advisories for likely impact of Heavy Rainfall

- In **Tamil Nadu**, harvest the matured paddy immediately in order to protect from rainfall. Provide support to banana plants with wooden poles to avoid lodging due to rain and wind. Ensure adequate drainage facility in the turmeric and sugarcane fields.



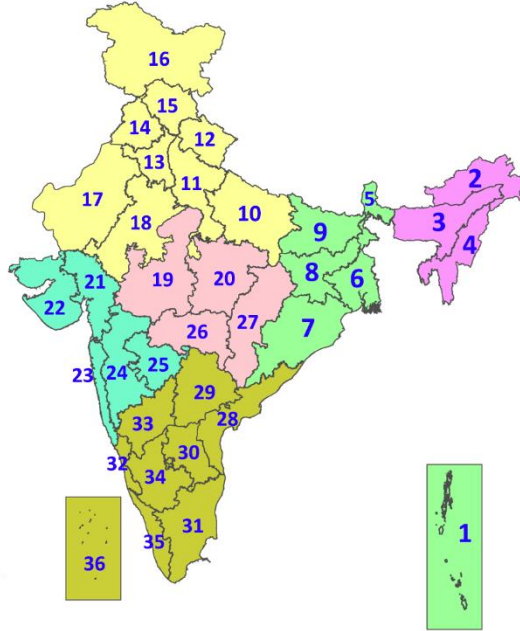
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



\* 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)

## 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

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