

Friday, February 21, 2025  
Time of Issue: 1345 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Realised weather during past 24 hours, from 0830 hours IST of yesterday to 0830 hours IST of today

##### Temperature:

- ❖ During Past 24 hours, Day temperatures have risen by 1-2°C at many places over Madhya Pradesh, East Rajasthan, Interior Odisha, along the west coast and northeast India. It has fallen by 06-12°C at many places over Western Himalayan Region, by 02-04°C West Rajasthan, Punjab, Haryana, Uttar Pradesh, North coastal Odisha, Jharkhand, Gangetic West Bengal and no significant change over rest parts of the country.
- ❖ Day temperatures were **above normal (2.0°C to 5.0°C)** at many places over Central India, West India, Interior Karnataka, West Telangana, Chhattisgarh, Interior Odisha, South Rajasthan, south Bihar, West Jharkhand and South Assam. These were **markedly below normal (<-5.1°C)** at many places over Western Himalayan Region, Northwest Punjab; **below normal (-1°C to -3°C)** at many places over North Punjab, North Haryana, Northwest Uttar Pradesh, North Coastal Odisha, Gangetic West Bengal and near normal over rest parts of the country
- ❖ During past 24 hours, Night temperatures have risen by 1-3°C at many places along the west coast, Bihar, Andaman Islands, Meghalaya, Manipur, Mizoram & Tripura and fallen by 2-4°C at many places over Western Himalayan Region, Punjab, Haryana, West Rajasthan, East Madhya Pradesh, North Chhattisgarh, Odisha, Jharkhand, Gangetic West Bengal, South interior Karnataka and Nagaland and no significant change over rest parts of the country.
- ❖ Night temperatures were **markedly above normal (5.1°C or more)** at isolated places over South Interior Karnataka, West Bihar, south Assam, Northwest Odisha, southeast Rajasthan **above normal (2.0°C to 5.0°C)** at a few places over south & east Rajasthan, Gujarat, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Madhya Pradesh, South Uttar Pradesh, Chhattisgarh, Bihar, Andaman & Nicobar Islands. These were **below normal (-1°C to -3°C)** at many places over Western Himalayan Region, Northwest Rajasthan, Punjab, Haryana, North Uttar Pradesh, Gangetic West Bengal, Northeast India and coastal & south Tamil Nadu near and near normal over rest parts of the country.

##### Weather Systems, Forecast and warning:

- ❖ A trough runs from Rayalaseema to South Chhattisgarh and an anti-cyclonic circulation lies over north Bay of Bengal in lower tropospheric levels. Under the influence of these systems;
  - ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning with squall (speed 40-60 kmph)** very likely over Odisha on 22<sup>nd</sup> & 23<sup>rd</sup>; **thunderstorm, lightning with gusty winds (speed 30-40 kmph)** very likely over Gangetic West Bengal, Jharkhand on 22<sup>nd</sup> & 23<sup>rd</sup>; Isolated to scattered light/moderate rainfall accompanied with **thunderstorm & lightning** very likely over Sub-Himalayan West Bengal & Sikkim, Bihar on 22<sup>nd</sup> & 23<sup>rd</sup>; Gangetic West Bengal and Odisha during 21<sup>st</sup>-24<sup>th</sup> February.
  - ✓ **Hailstorm activity also likely at isolated places over Gangetic West Bengal, Jharkhand & Odisha on 22<sup>nd</sup> February.**
  - ✓ **Heavy rainfall/snowfall** at isolated places likely over Andaman & Nicobar Islands on 25<sup>th</sup> & 26<sup>th</sup> February.
- ❖ A **fresh Western Disturbance** is likely to affect Northwest India from the night of 24th February, 2025. Under its influence,
  - ✓ **Fairly widespread to widespread** light to moderate rainfall/snowfall accompanied with thunderstorm & lightning over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh during 25<sup>th</sup>-27<sup>th</sup>; **Scattered to fairly widespread** light to moderate rainfall/snowfall accompanied with thunderstorm & lightning over Uttarakhand during 25<sup>th</sup>-27<sup>th</sup> February.
  - ✓ **Heavy rainfall/snowfall** at isolated places likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 25<sup>th</sup>-27<sup>th</sup>; Himachal Pradesh on 26<sup>th</sup> & 27<sup>th</sup>; Uttarakhand on 27<sup>th</sup> February.
  - ✓ Isolated light to moderate rainfall likely over Punjab, Haryana, Chandigarh on 26<sup>th</sup> & 27<sup>th</sup>; over West Uttar Pradesh and West Rajasthan on 27<sup>th</sup> February.
- ❖ Isolated light/moderate rainfall very likely over Karnataka on 21<sup>st</sup> & 22<sup>nd</sup>; Coastal Andhra Pradesh & Yanam, Rayalaseema during 21<sup>st</sup>-23<sup>rd</sup>; over Kerala & Mahe during next 7 days.
- ❖ An **upper air cyclonic circulation** lies over Nagaland in lower tropospheric levels. Under its influence,
  - ✓ Isolated to scattered light rainfall activity likely over Northeast India and Sub-Himalayan West Bengal & Sikkim during next 7 days.
  - ✓ Thunderstorm & lightning activity likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 21<sup>st</sup> -23<sup>rd</sup> February; with **gusty winds (speed 30-40 kmph)** over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 22<sup>nd</sup> February.
- ❖ **Heavy rainfall/snowfall at isolated places likely over Arunachal Pradesh on 21<sup>st</sup> February.**

##### Forecast of temperature:

##### Minimum Temperature:

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

##### Maximum temperature:

- ❖ Gradual rise in maximum temperatures by 2-4°C likely over Northwest India during next 4 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures likely over Gujarat Region during next 3 days and gradual rise by 2-3°C during subsequent 2 days.
- ❖ No significant change in maximum temperatures likely over rest parts of India during next 4-5 days.

##### Dense Fog Warnings:

- ✓ **Dense fog conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Himachal Pradesh till 22<sup>nd</sup>; Sub-Himalayan West Bengal & Sikkim till 24<sup>th</sup> February.

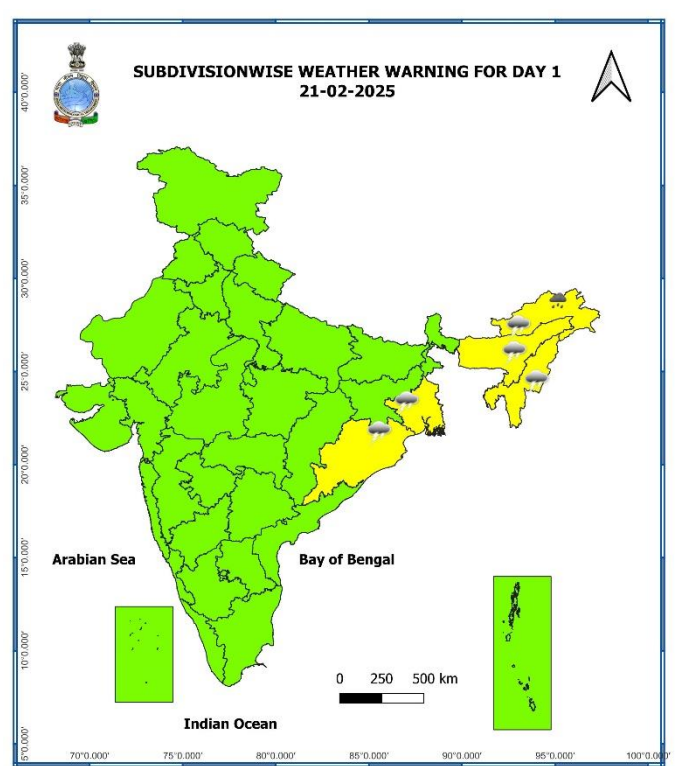
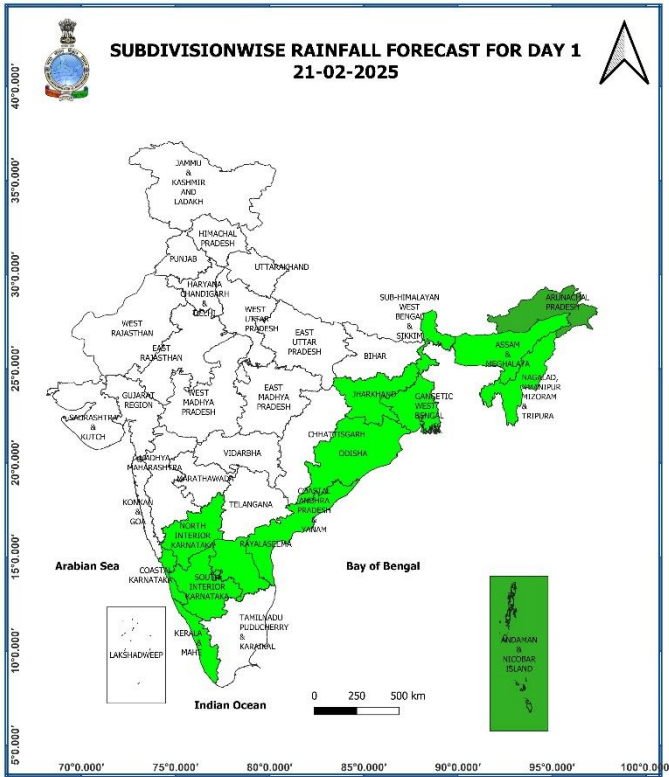
## Main Weather Observations:

- ❖ **Rainfall/Snowfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Punjab; at many places over Gangetic West Bengal; at a few places over Haryana Chandigarh, West Uttar Pradesh, North Odisha, Arunachal Pradesh; at isolated places over Northeast Uttar Pradesh, North Chhattisgarh, Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Assam & Meghalaya.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): **Gangetic West Bengal:** Burdwan (dist Purba Bardhaman) 8, Alipore (dist Kolkata) 5; **Jharkhand:** Torpa (dist Khunti) 8, Chaibasa (dist West Singhbhum) 4; **Odisha:** Athgarh (Cuttack) 5, Ghasipura (Keonjhar) 4, Bhandaripokhari (Bhadrak) 4; **Chhattisgarh:** Kansabel (dist Jashpur) 4; **Himachal Pradesh:** Nagrota Surian (dist Kangra) 6, Ghamroor (dist Kangra) 4, Koksar (dist Lahaul & Spiti) 4, Chamba (dist Chamba) 4, Saloni (dist Chamba) 4, Keylong (dist Lahaul & Spiti) 4, Tissa (dist Chamba) 4; **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Batote (dist Ramban) 5, Badarwah (dist Doda) 4, Banihal (dist Ramban) 4; **Haryana:** Shivan Rev (dist Kaithal) 2; **Punjab:** Balachaur (dist Sbs Nagar) 3, Amritsar (dist Amritsar) 3, Gurudaspur (dist Gurdaspur) 3.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Jharkhand and Gangetic West Bengal.
- ❖ **Hailstorm recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, North Chhattisgarh and North Interior Odisha.
- ❖ **Dense fog (visibility 50-199 m)** reported in isolated pockets of Himachal Pradesh, Punjab and East Rajasthan.
- ❖ **Visibility reported ( $\leq 200$  m) (in meter):** **Himachal Pradesh:** Sundernagar 150; **Punjab:** Faridkot, Bathinda 100, **East Rajasthan:** Pilani.
- ❖ **Minimum Temperature Departures (as on 21-02-2025):** Minimum temperatures are **markedly above normal ( $5.1^{\circ}\text{C}$  or more)** at isolated places over Coastal Karnataka; **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at a few places over East Rajasthan, Gujarat Region, Chhattisgarh; at isolated places over Madhya Pradesh, Saurashtra & Kutch, Marathwada, Madhya Maharashtra, Bihar; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at few places over Telangana, Andaman & Nicobar Islands, Kerala & Mahe; at isolated places over West Rajasthan, Uttar Pradesh, Haryana-Chandigarh-Delhi, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Coastal Andhra Pradesh & Yanam, Rayalaseema and South Interior Karnataka. These are **appreciably below normal ( $-5.0^{\circ}\text{C}$  to  $-3.1^{\circ}\text{C}$ )** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand and **below normal ( $-3.0^{\circ}\text{C}$  to  $-1.6^{\circ}\text{C}$ )** at isolated places over Tamil Nadu, Puducherry & Karaikal, Gangetic West Bengal, Odisha and near normal over rest parts of the country (Fig. 4). Today, the **lowest minimum temperature** of  $6.1^{\circ}\text{C}$  is reported at **Amritsar (Punjab)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 20-02-2025):** Maximum temperatures were **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at a few places over Vidarbha; at isolated places over East Rajasthan, West Madhya Pradesh and Konkan & Goa; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at most places over East Madhya Pradesh; at a few places over Marathwada, Madhya Maharashtra and Saurashtra & Kutch; at isolated places over Chhattisgarh, Odisha, Telangana, North Interior Karnataka, Bihar, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, West Rajasthan, Gujarat Region, Nagaland, Manipur, Mizoram & Tripura and Jharkhand. These were **appreciably below normal ( $-5.0^{\circ}\text{C}$  to  $-3.1^{\circ}\text{C}$ )** at **isolated places over Gangetic West Bengal, Himachal Pradesh, Uttarakhand and below normal ( $-3.0^{\circ}\text{C}$  to  $-1.6^{\circ}\text{C}$ )** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and near normal over rest parts of the country (Fig. 2). Yesterday, the highest **maximum temperature** of  $38.2^{\circ}\text{C}$  was reported at Kalaburagi (**North Interior Karnataka**) over the country.

## Meteorological Analysis (Based on 0830 hours IST)

- ❖ The **cyclonic circulation** over Haryana & neighbourhood persists and now seen at 1.5 km above mean sea level.
- ❖ A **trough in easterlies** runs from Rayalaseema to South Chhattisgarh at 0.9 km above mean sea level.
- ❖ The **cyclonic circulation** over Nagaland & neighbourhood at 1.5 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from the night of 24<sup>th</sup> February, 2025.
- ❖ The **trough** from north Bangladesh to Telangana across Gangetic West Bengal, interior Odisha & south Chhattisgarh extending upto 1.5 km above mean sea level has become less marked.

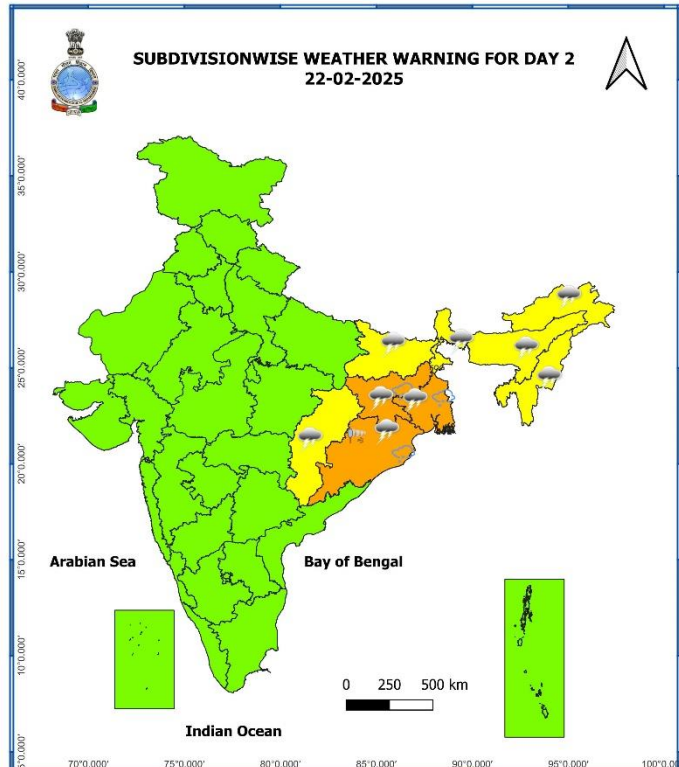
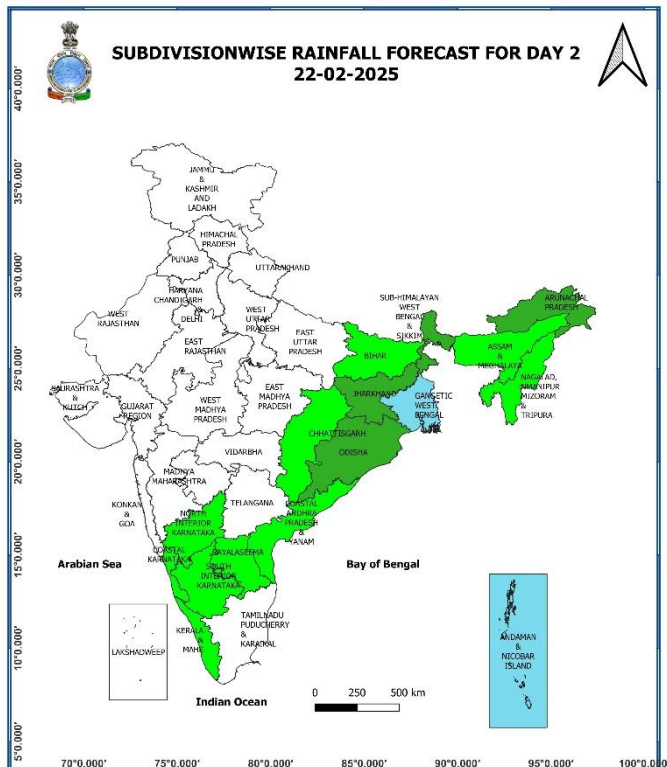
**Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 28<sup>th</sup> February, 2025)**



**21<sup>st</sup> February (Day 1):**

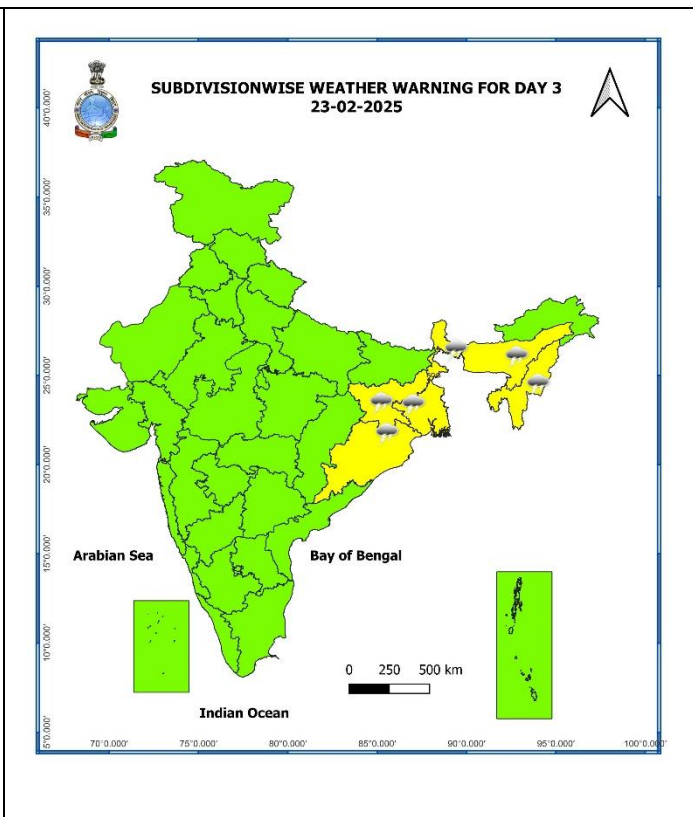
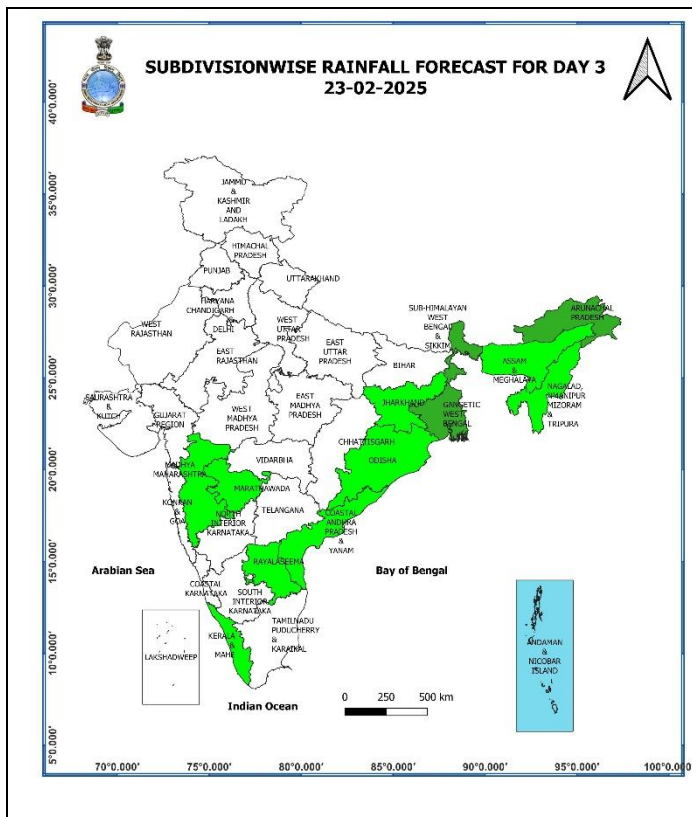
- ❖ **Heavy Rainfall ( $\geq 7$  cm)** very likely at isolated places of Arunachal Pradesh.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Dense fog conditions** very likely in isolated pockets of Himachal Pradesh.





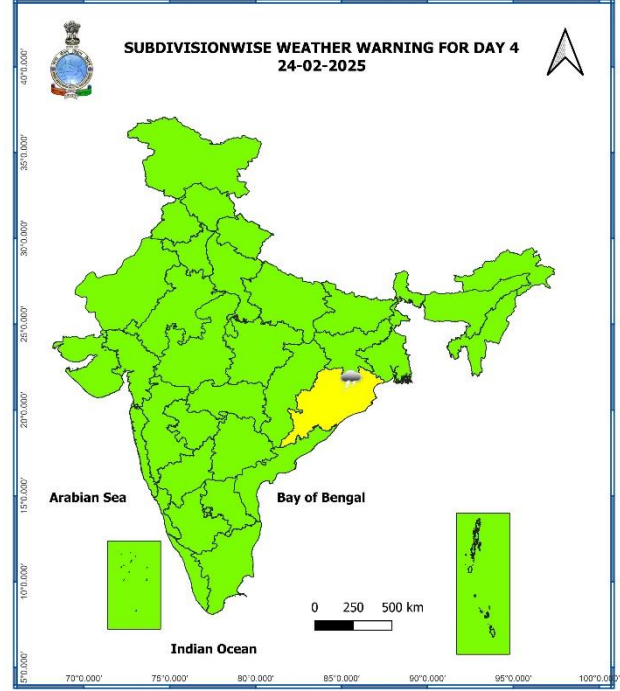
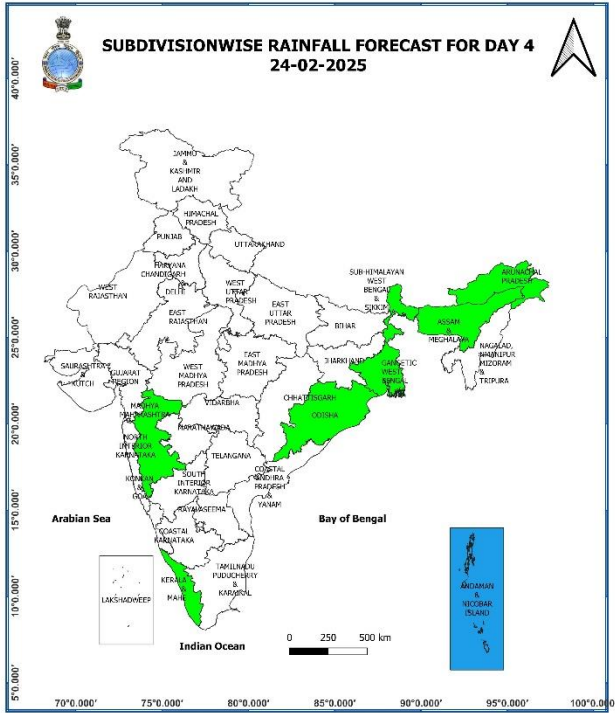
## 22<sup>nd</sup> February (Day 2):

- ❖ **Thundersquall accompanied with gusty winds (50-60 kmph), Hailstorm & lightning** likely at isolated places over Odisha; **Thunderstorm accompanied with gusty winds (40-50 kmph), Hailstorm & lightning** at isolated places over Jharkhand; **with gusty winds (30-40 kmph), Hailstorm & lightning** at isolated places over Gangetic West Bengal; **with gusty winds (30-40 kmph) & lightning** at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, north Chhattisgarh and Arunachal Pradesh.
- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim.



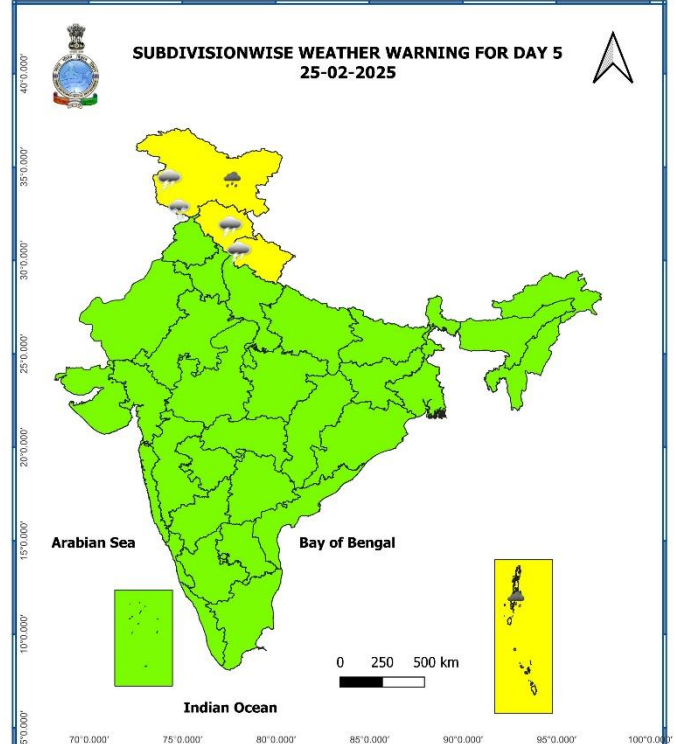
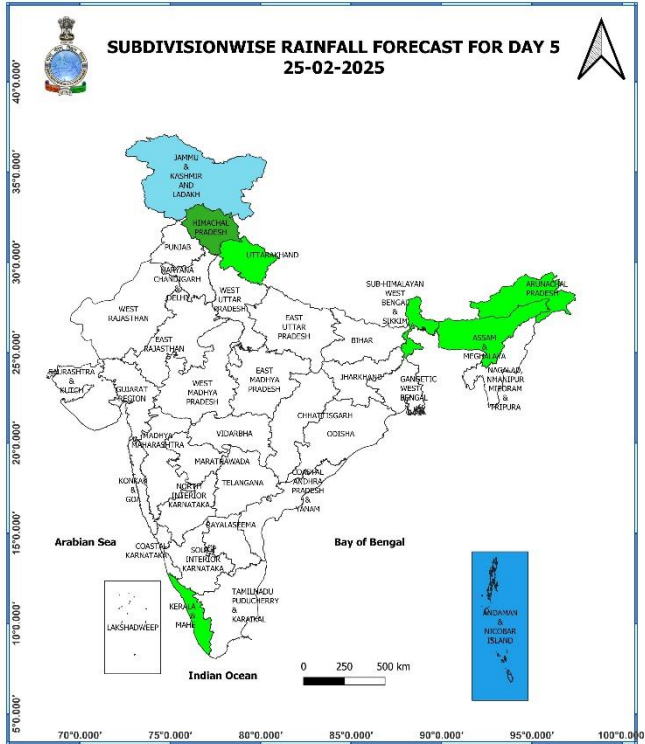
### 23<sup>rd</sup> February (Day 3):

- ❖ **Thunderstorm accompanied with gusty winds (30-40 kmph) & lightning** likely at isolated places over Gangetic West Bengal and Jharkhand; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim.



## 24<sup>th</sup> February (Day 4):

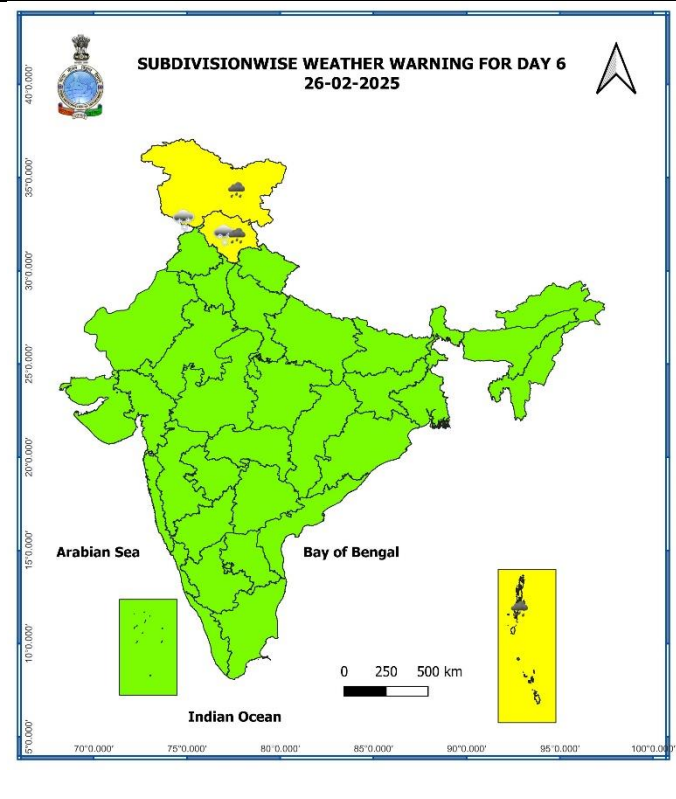
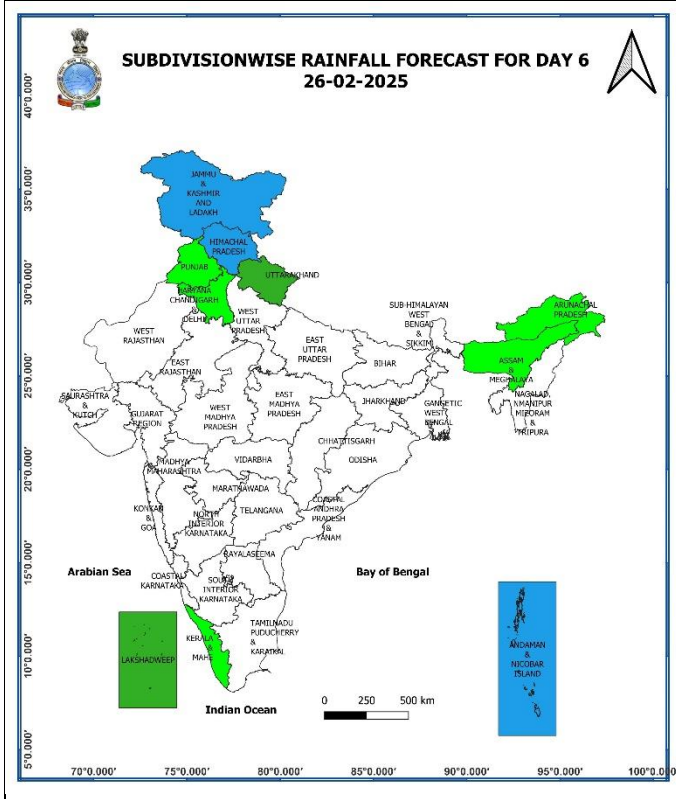
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Odisha.



### 25<sup>th</sup> February (Day 5):

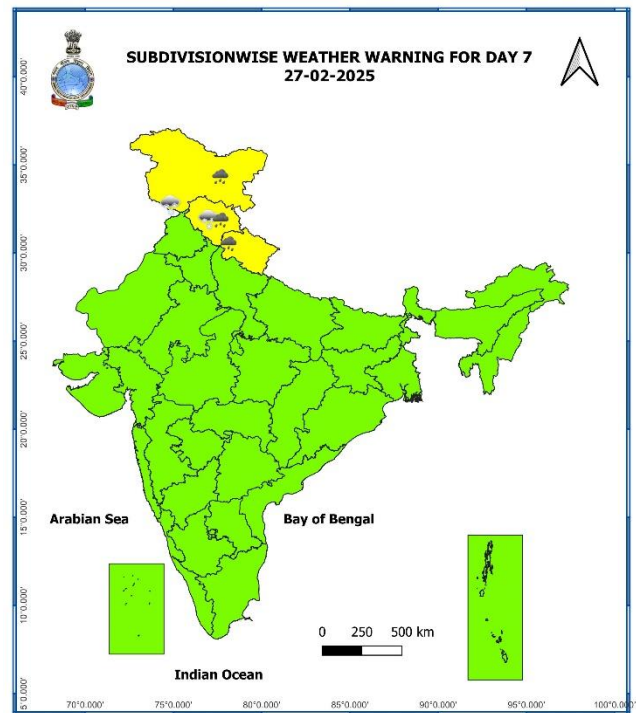
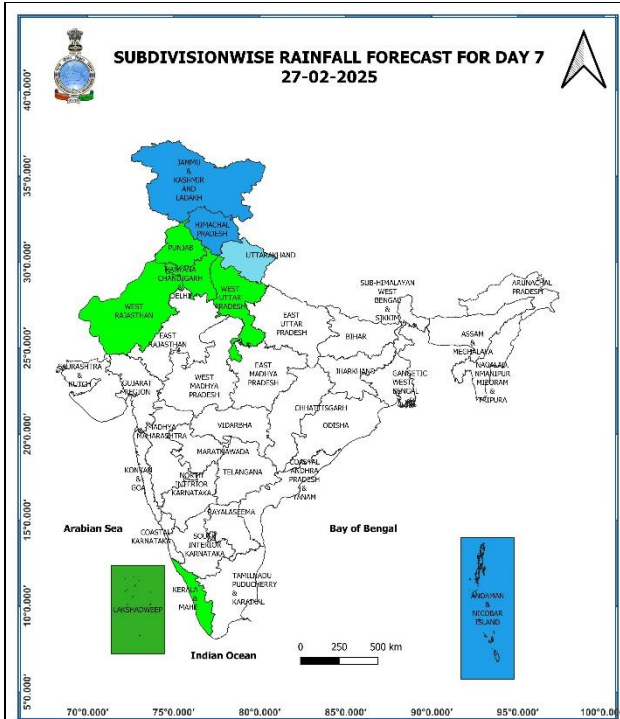
- ❖ **Heavy Rainfall/Snowfall ( $\geq 7$  cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and **Heavy Rainfall ( $\geq 7$  cm)** likely at isolated places of Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.





**26<sup>th</sup> February (Day 6):**

- ❖ **Heavy Rainfall/Snowfall ( $\geq 7$  cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and **Heavy Rainfall ( $\geq 7$  cm)** likely at isolated places of Andaman & Nicobar Islands.



### 27<sup>th</sup> February (Day 7):

- ❖ **Heavy Rainfall/Snowfall ( $\geq 7$  cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.

### Weather Outlook for subsequent 3 days (During 28<sup>th</sup> February- 02<sup>nd</sup> March, 2025)

- ❖ **Scattered to fairly widespread rainfall/snowfall** likely over Western Himalayan region.
- ❖ **Isolated to scattered rainfall** likely over plains of Northwest India, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal 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

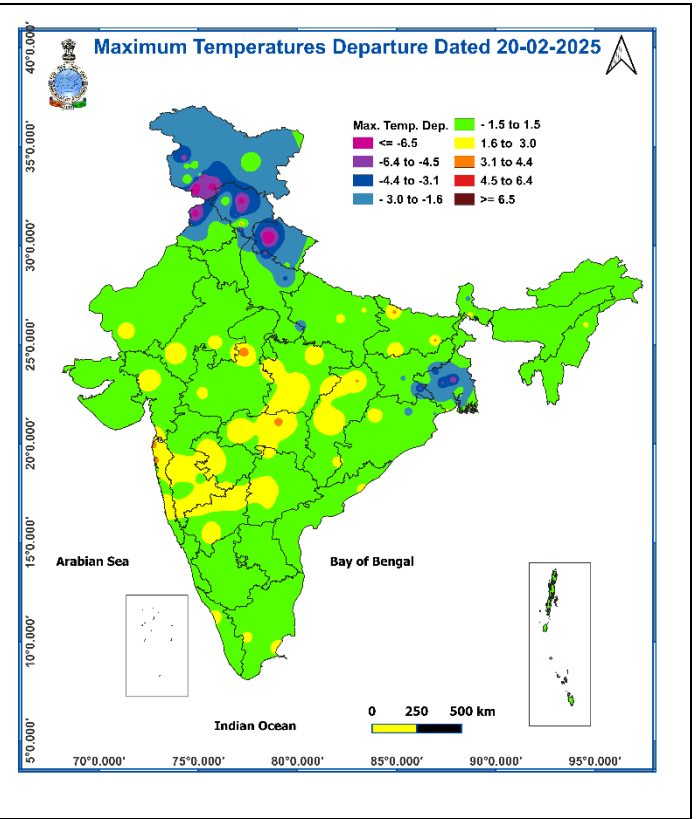
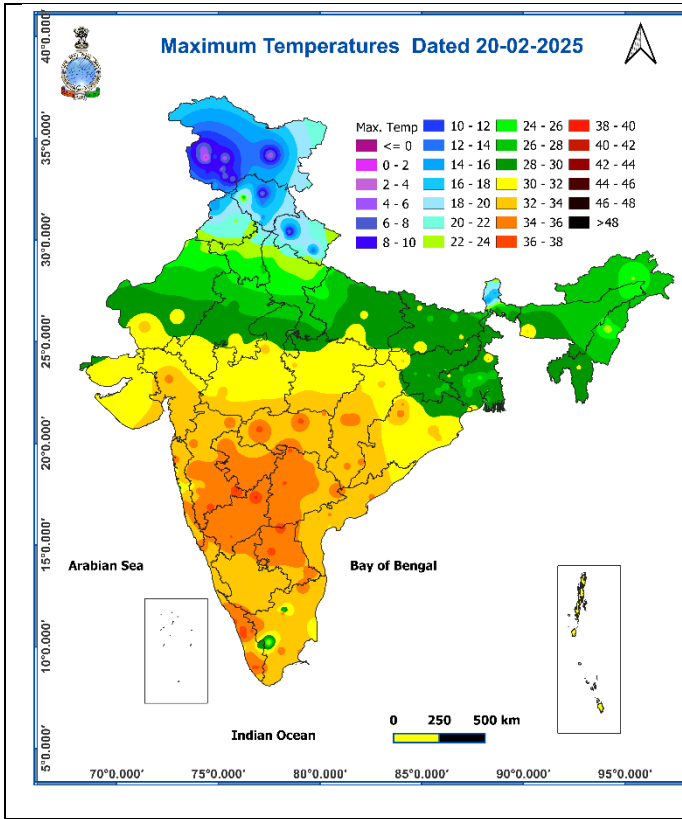
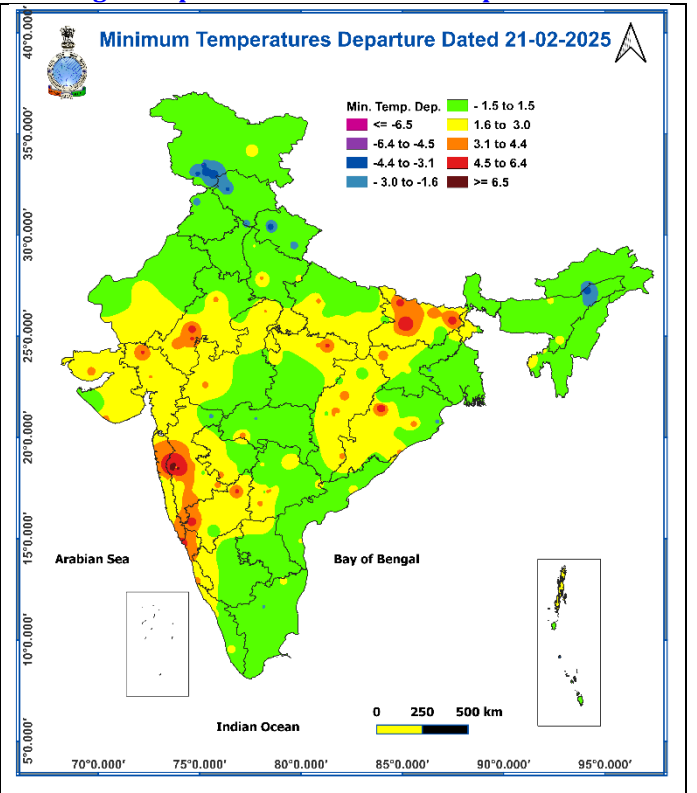
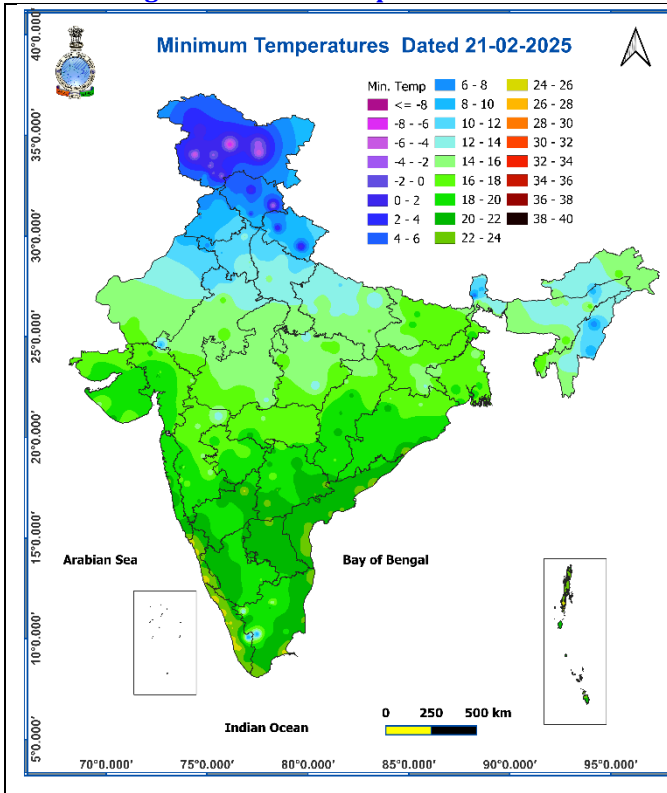


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



## Agromet advisories for likely impact of Heavy Rainfall / Hailstorms

- Use hail nets or hail caps in fruit orchards and vegetable plants to protect them from mechanical damage in **Gangetic West Bengal, Odisha and Jharkhand**.
- Make provision for draining out excess water from the fields of rice, mustard, field pea, other standing crops, vegetables and horticultural crops in **Arunachal Pradesh** to avoid water stagnation.
- 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/ hailstorms and provide them with balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.

## Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm

### Impact expected:

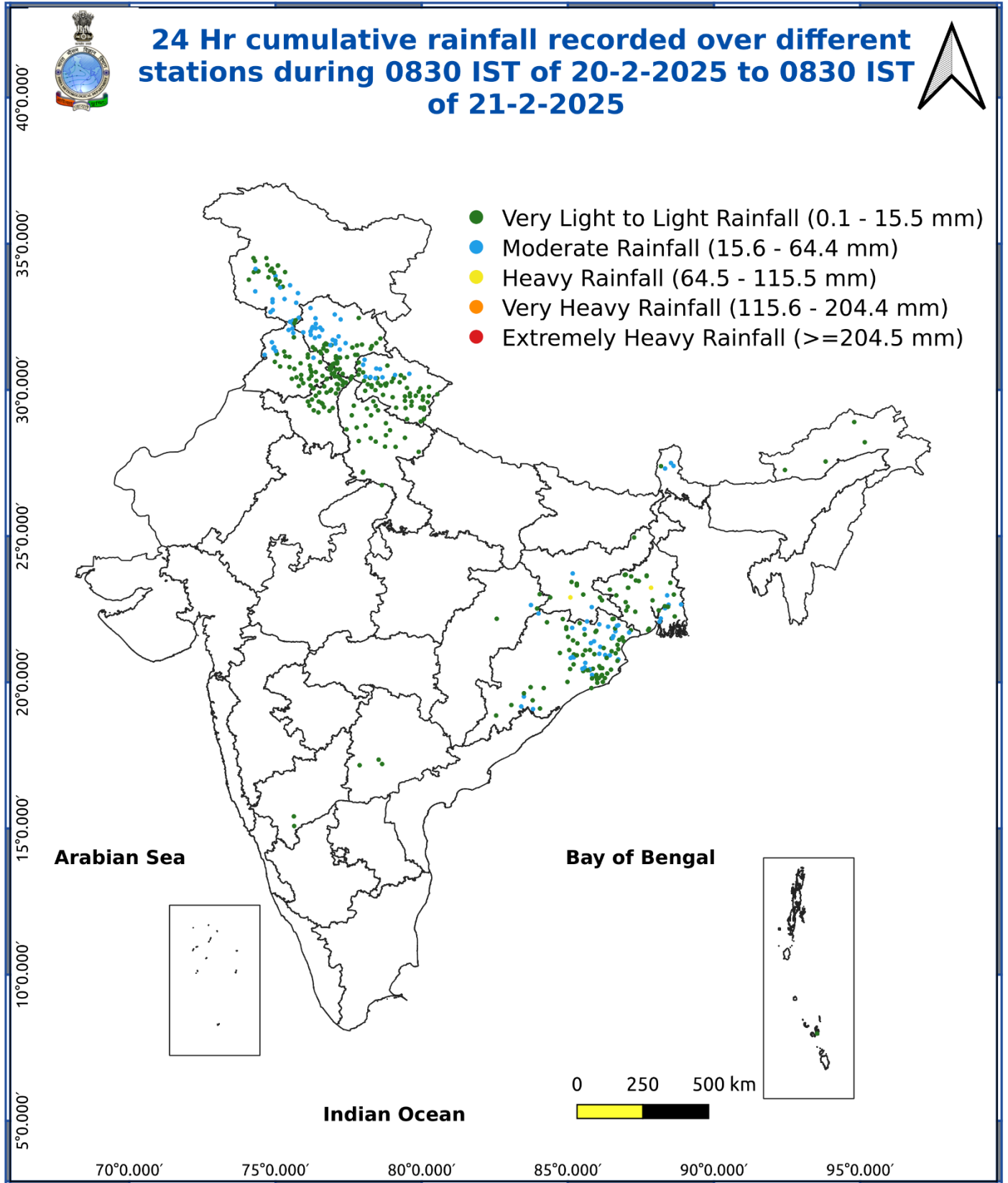
- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

### 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.



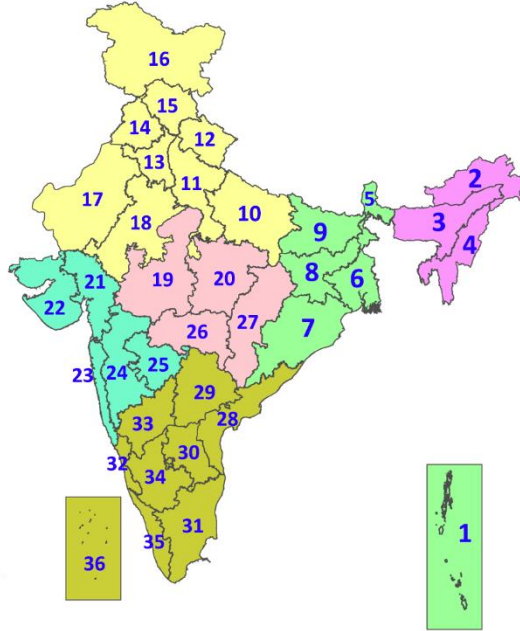
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



\* 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>