

Wednesday, February 26, 2025  
Time of Issue: 0750 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Temperature:

- ❖ On 25<sup>th</sup> February, Day temperatures had fallen by 1-2°C at many places over coastal Andhra Pradesh, West Madhya Pradesh and Andaman & Nicobar Islands. It had risen by 1-3°C at many places along the west coast, Telangana, Northwest India, East Madhya Pradesh, Interior Odisha, Gangetic West Bengal and Northeast India.
- ❖ On 25<sup>th</sup> February, maximum temperatures had fallen by 1-2°C at many places over coastal Andhra Pradesh, West Madhya Pradesh and Andaman & Nicobar Islands. It had risen by 1-3°C at many places along the west coast, Telangana, Northwest India, East Madhya Pradesh, Interior Odisha, Gangetic West Bengal and Northeast India.
- ❖ Maximum temperatures were in the range of 35-39°C over many parts of West & south Peninsular India, south Odisha, South Chhattisgarh; 30-35°C over many parts of south Rajasthan, Madhya Pradesh, coastal Odisha, North Chhattisgarh, south Gangetic West Bengal; 25-30°C over remaining parts of the plains of the country.
- ❖ Minimum temperatures were in the range of 0 °C to -7 °C over Kashmir & Ladakh; 6°C to 13°C over many parts of Jammu, Himachal Pradesh, Uttarakhand, Haryana, Punjab, Uttar Pradesh, North Madhya Pradesh; 8-14°C over many parts of Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh & East Rajasthan; 14-22°C over many parts of rest parts of the country. Yesterday, the lowest minimum temperature of 9.1°C was reported at Nahan (Haryana) over the plains of the country.
- ❖ On 25<sup>th</sup> February, minimum temperatures had fallen by 1-3°C at a few places over East Uttar Pradesh, Northwest Madhya Pradesh, Sub Himalayan West Bengal & Sikkim, Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Goa, North Interior Karnataka and it had risen by 1-3°C over most parts of Northwest India; at a few places over South Madhya Pradesh, Gujarat region & interior Maharashtra.

#### Weather Systems, Forecast and warning:

- ❖ A Western Disturbance as a trough in lower to upper tropospheric levels with its axis at 3.1 km above mean sea level roughly along Long. 56°E to the north of Lat. 24°N. Under its influence, an induced low pressure area likely to form over West Rajasthan & adjoining Pakistan area during next 24 hours. There is divergence of the order of 30-40 x 10<sup>-6</sup> s<sup>-1</sup> in forward sector of the trough over North Pakistan and adjoining Indian Himalayas. High moisture feeding is also likely over Western Himalayan Region in lower tropospheric levels from Arabian Sea mainly during 26<sup>th</sup>-28<sup>th</sup> February, 2025. As a result;
  - ✓ **Fairly widespread to widespread** light to moderate rainfall/snowfall accompanied with thunderstorm & lightning likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand & Himachal Pradesh during 26<sup>th</sup>-28<sup>th</sup> February.
  - ✓ **Heavy rainfall/snowfall** at isolated places likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during 26<sup>th</sup>-28<sup>th</sup> and Uttarakhand on 27<sup>th</sup> & 28<sup>th</sup> February with isolated **very heavy rainfall/snowfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 26<sup>th</sup> & 27<sup>th</sup> & Himachal Pradesh on 27<sup>th</sup> February.
  - ✓ **Isolated to scattered** light to moderate rainfall likely over Punjab, Haryana, Chandigarh and West Rajasthan during 26<sup>th</sup> February-01<sup>st</sup> March; West Uttar Pradesh on 27<sup>th</sup> & 28<sup>th</sup> February; East Uttar Pradesh on 28<sup>th</sup> February & 01<sup>st</sup> March; East Rajasthan during 27<sup>th</sup>February-01<sup>st</sup> March with **gusty winds (speed 30-40 kmph)** very likely over Punjab & Haryana on 27<sup>th</sup> & 28<sup>th</sup> February. Thunderstorm & lightning activity also likely over Punjab & Haryana during 26<sup>th</sup>-28<sup>th</sup> February; West Uttar Pradesh during 27<sup>th</sup>February-01<sup>st</sup> March; East Uttar Pradesh and Rajasthan on 28<sup>th</sup> February.
  - ✓ **Isolated Hailstorm activity also likely over Punjab and Haryana on 27<sup>th</sup> February.**
- ❖ An upper air cyclonic circulation lies over northeast Assam in lower tropospheric levels with a trough aloft at 3.1 km above mean sea level roughly along Long. 94°E to the north of Lat. 25°N.
- ❖ Under the influence of an active easterly wave;
  - ✓ **Fairly widespread to widespread** light/moderate rainfall accompanied with **thunderstorm, lightning** very likely over Andaman & Nicobar Islands on 26<sup>th</sup> February.
  - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm & lightning** very likely over Tamilnadu Puducherry & Karaikal and Kerala & Mahe during 27<sup>th</sup> February to 1<sup>st</sup> March with isolated Heavy rainfall on Tamilnadu Puducherry & Karaikal during 27<sup>th</sup> February - 01<sup>st</sup> March; Kerala & Mahe on 28<sup>th</sup> February & 01<sup>st</sup> March.
  - ✓ A fresh **Western Disturbance** is likely to affect Northwest India from 02<sup>nd</sup> March. Under its influence; **Scattered to Fairly widespread** light/moderate rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh on 02<sup>nd</sup> & 03<sup>rd</sup>; **Isolated** light/moderate rainfall/snowfall likely over Uttarakhand on 02<sup>nd</sup> & 03<sup>rd</sup> March.

#### Temperature Forecast:

##### Forecast of temperature:

##### Minimum Temperature:

- ❖ Gradual rise in minimum temperatures by 2-3°C likely over Northwest India during next 3 days and gradual fall by 2-4°C thereafter.
- ❖ Gradual rise in minimum temperatures by 2-4°C likely over Central India during next 4-5 days.
- ❖ No significant change in minimum temperatures likely over East India during next 3 days and gradual rise by 2-3°C thereafter.
- ❖ Gradual rise in minimum temperatures by 2-4°C likely over interior Maharashtra during next 4-5 days.
- ❖ 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 about 2°C likely over plains of Northwest India during next 24 hours gradual fall by 4-6°C thereafter.
- ❖ Gradual rise in maximum temperatures by 2-4°C likely over Central India during next 4-5 days.
- ❖ No significant change in maximum temperatures likely over East India during next 3 days and gradual rise by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures likely over rest parts of India during next 4-5 days.

#### Heat Wave and Hot & Humid weather warnings:

- ❖ **Heat wave conditions** very likely in isolated pockets over Konkan & Goa and north Kerala on 26<sup>th</sup>; Coastal Karnataka on 26<sup>th</sup> & 27<sup>th</sup> February.
- ❖ **Hot and humid weather** very likely to prevail over Gujarat State on 26<sup>th</sup> & 27<sup>th</sup>; Coastal Karnataka on 28<sup>th</sup> February & 01<sup>st</sup> Mach.

\* 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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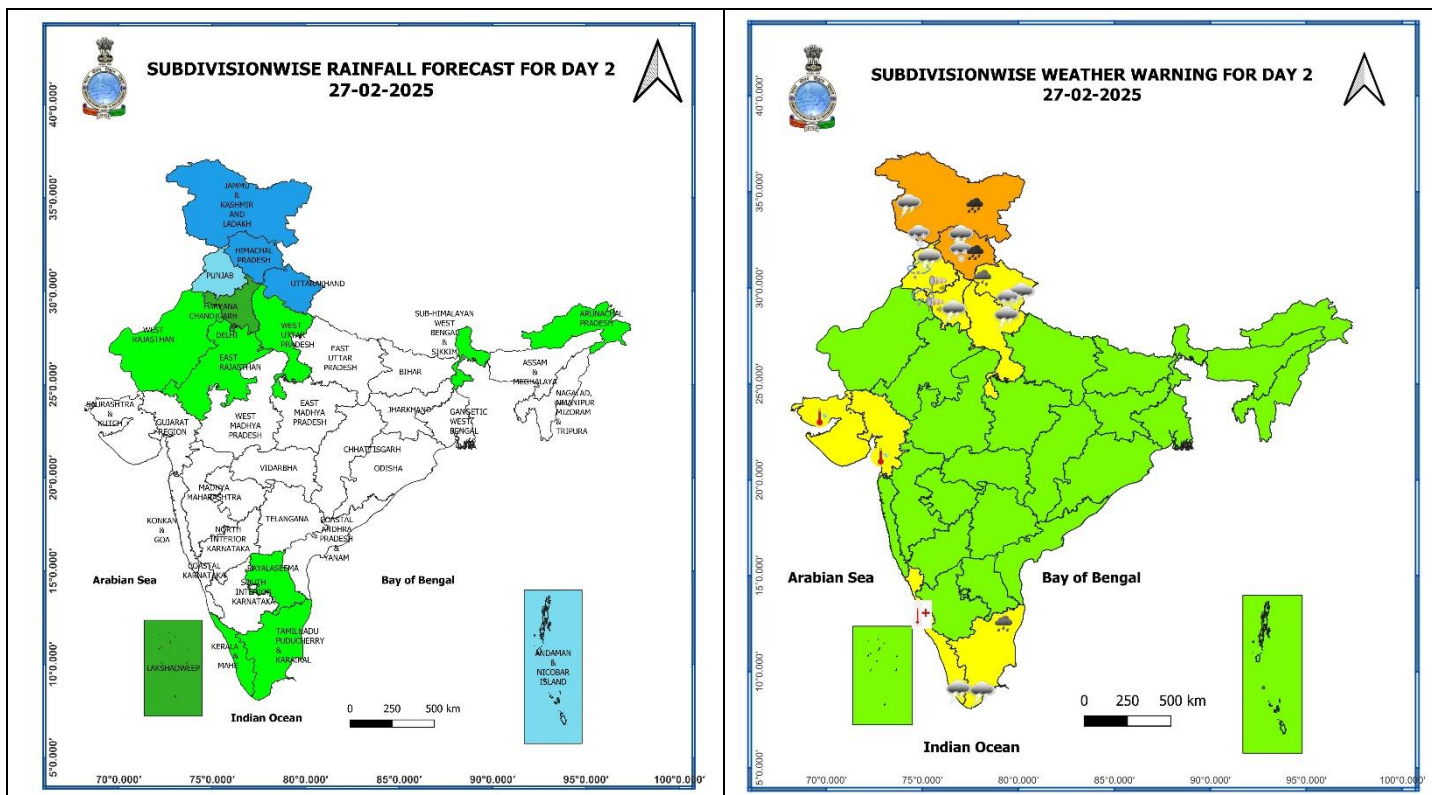
## Main Weather Observations:

- ❖ **Rainfall/snowfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at many places over Andaman & Nicobar Islands; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh; at isolated places over Arunachal Pradesh, Assam & Meghalaya, Punjab, Tamil Nadu, Puducherry & Karaikal;
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm):  
**Andaman & Nicobar Islands:** Hut Bay 3.
- ❖ **Minimum Temperature Departures (as on 25-02-2025):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Gujarat state; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and East Rajasthan; **above normal (1.6°C to 3.0°C)** at isolated places over West Rajasthan, Punjab, Himachal Pradesh, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Konkan & Goa, Madhya Maharashtra and Lakshadweep. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over West Madhya Pradesh; **below normal (-3°C to -1°C)** at isolated places over East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh and West Bengal and near normal over rest parts of the country (Fig. 4). Yesterday, the **lowest minimum temperature of 8.5°C** was reported at **Ayodhya (Uttar Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 25-02-2025):** Maximum temperatures were **markedly above normal (5.1°C or more)** at few places over Konkan & Goa; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Coastal Karnataka; **above normal (1.6°C to 3.0°C)** at a few places over Haryana-Chandigarh-Delhi, Saurashtra & Kutch; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Punjab, Rajasthan, West Madhya Pradesh, Chhattisgarh, Gujarat Region, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe. These were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Andaman & Nicobar Islands; at isolated places over Himachal Pradesh, Assam & Meghalaya; **below normal (-3°C to -1°C)** at isolated places over East Madhya Pradesh, Madhya Maharashtra, East Uttar Pradesh, North Interior Karnataka and near normal over rest parts of the country (Fig. 2). Yesterday, the highest **maximum temperature of 39.0°C** was reported at **Kannur Airport (Kerala)** over the country.

### Meteorological Analysis (Based on 0530 hours IST)

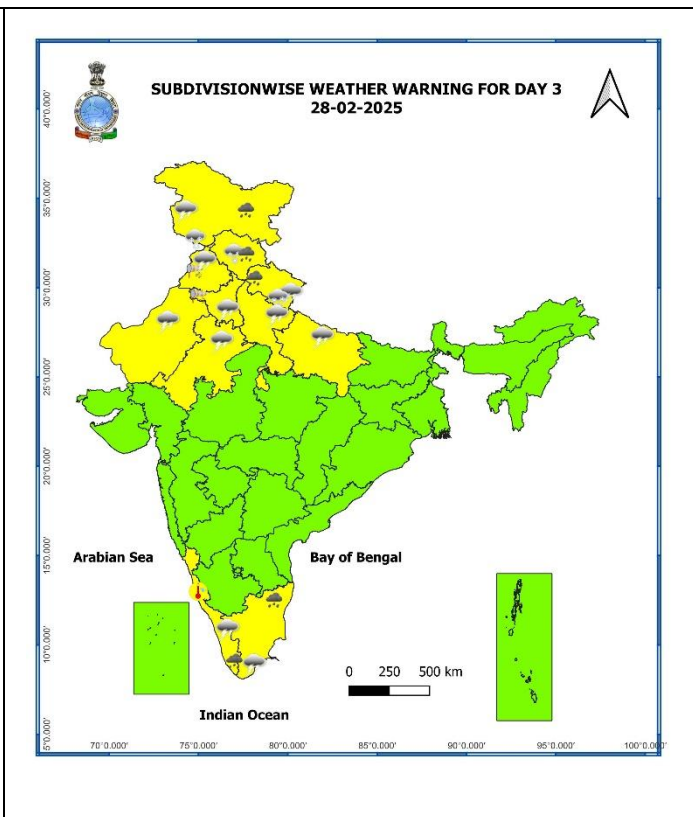
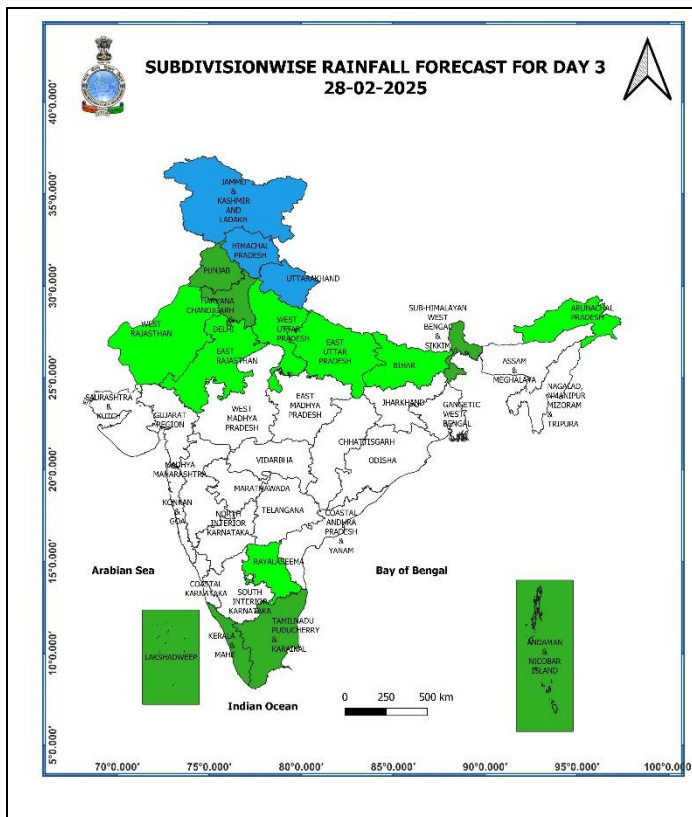
- ❖ The **Western Disturbance** as a trough in lower to upper tropospheric levels with its axis at 3.1 km above mean sea level now runs roughly along Long. 56°E to the north of Lat. 24°N. There is a **Divergence** of the order of  $30-40 \times 10^{-6} \text{ s}^{-1}$  in forward sector of the trough over North Pakistan and adjoining Indian Himalayas.
- ❖ The **cyclonic circulation** over southwest Rajasthan & adjoining south Pakistan extending upto 1.5 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over northeast Assam & neighbourhood at 1.5 km above mean sea level with a trough aloft at 3.1 km above mean sea level roughly along Long. 94°E to the north of Lat. 25°N persists.
- ❖ The upper air **cyclonic circulation** over south Kerala & neighbourhood at 3.1 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from 02<sup>nd</sup> March.





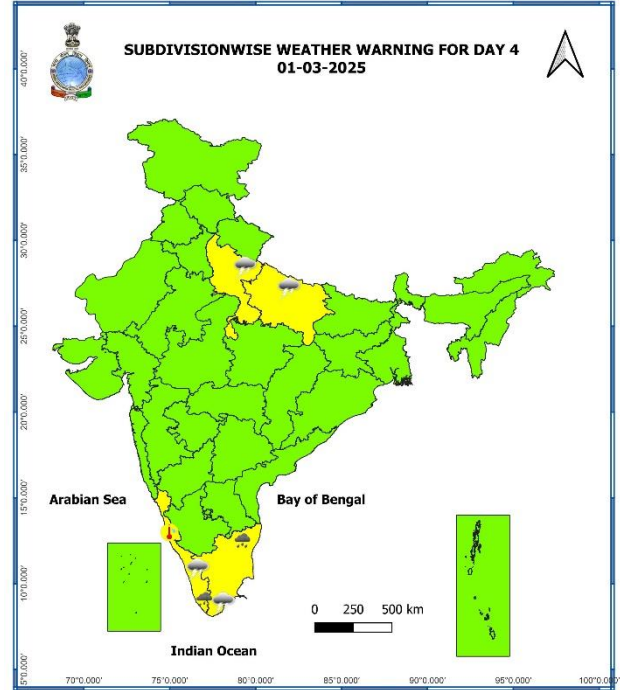
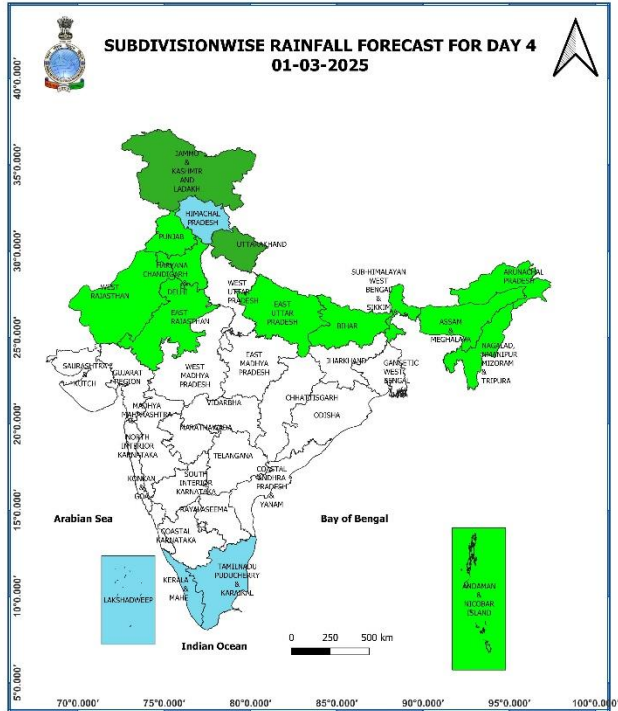
### 27<sup>th</sup> February (Day 2):

- ❖ **Heavy to very heavy Rainfall/Snowfall ( $\geq 12$  cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh; **Heavy Rainfall/Snowfall ( $\geq 7$  cm)** likely at isolated places of Uttarakhand; **Heavy Rainfall ( $\geq 7$  cm)** likely at isolated places of Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied with gusty wind (30-40 kmph), hailstorm and lightning** likely at isolated places over Punjab and Haryana-Chandigarh-Delhi; **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Hot & Humid conditions** very likely in isolated pockets of Gujarat state.
- ❖ **Heat wave conditions** likely at isolated pockets of Coastal Karnataka.
- ❖ **Squally weather with wind (speed 35 kmph to 45 kmph gusting to 55 kmph)** likely to prevail over Gulf of Mannar & adjoining Comorin area, along and off south Tamil Nadu coast, over south Andaman Sea & adjoining north Andaman sea, over many parts of southeast Bay of Bengal, northern parts of southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



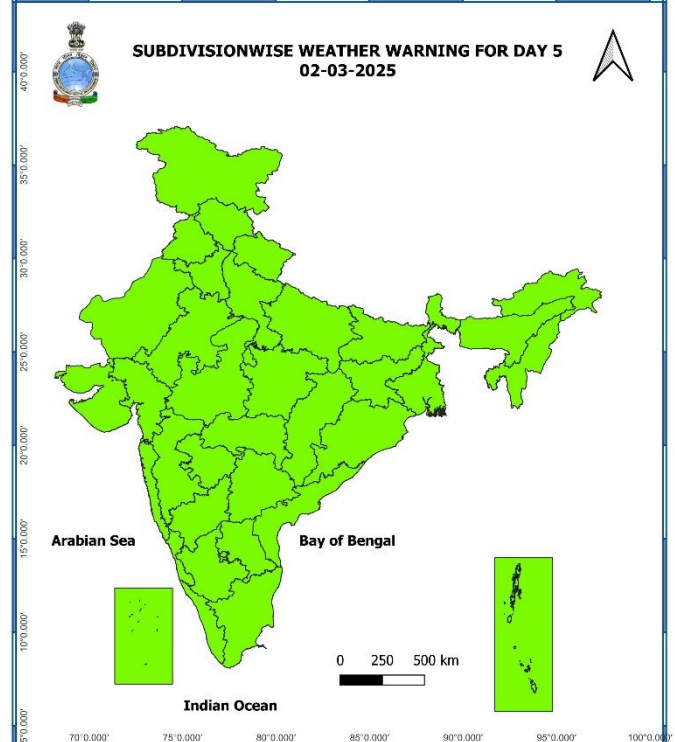
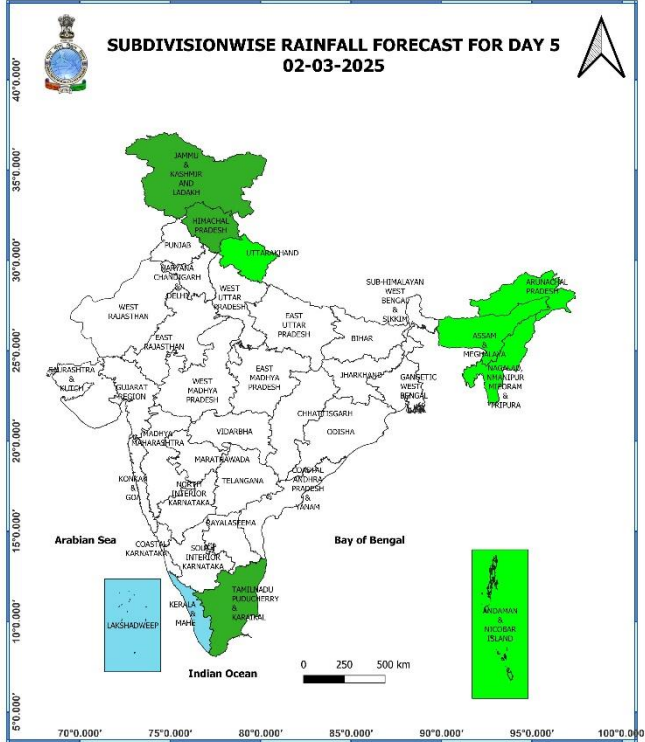
**28<sup>th</sup> February (Day 3):**

- ❖ **Heavy Rainfall/Snowfall ( $\geq 7$  cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand; **Heavy Rainfall ( $\geq 7$  cm)** likely at isolated places of Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with gusty wind (30-40 kmph) and lightning** likely at isolated places over Punjab and Haryana-Chandigarh-Delhi; **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Uttar Pradesh, Rajasthan, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Hot & Humid conditions** very likely at isolated pockets of Coastal Karnataka.
- ❖ **Squally weather with wind (speed 35 kmph to 45 kmph gusting to 55 kmph)** likely to prevail over gulf of Mannar & adjoining Comorin area along and off south Tamil Nadu coast. Fishermen are advised not to venture into these areas.



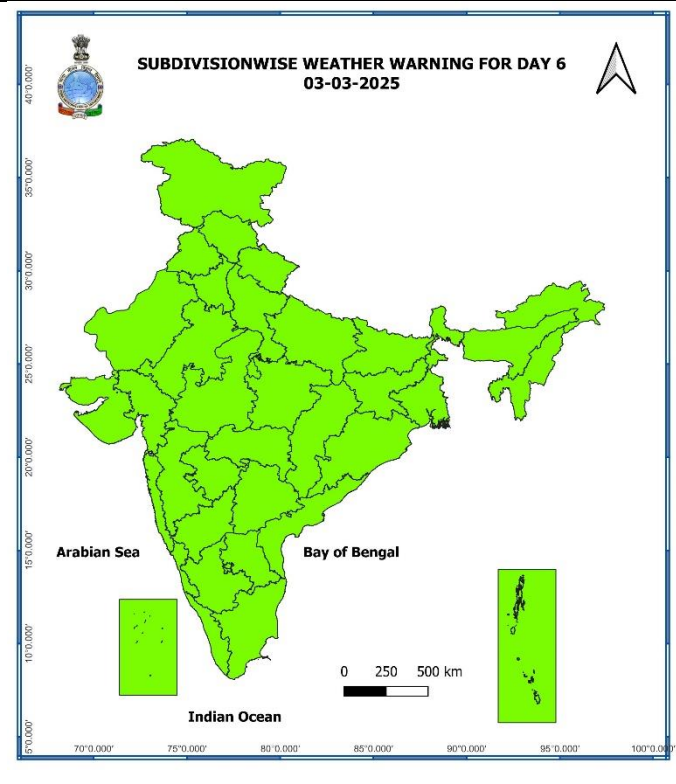
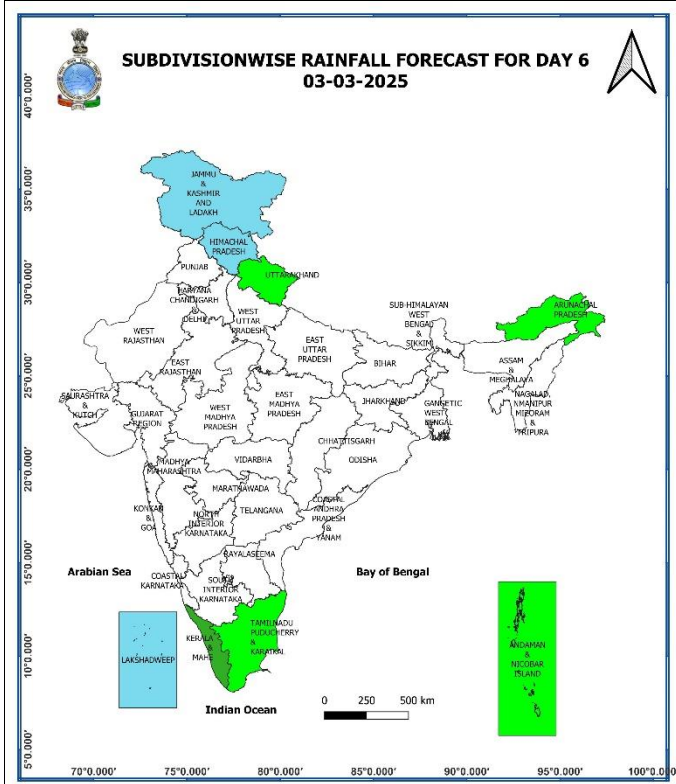
### 01<sup>st</sup> March (Day 4):

- ❖ **Heavy Rainfall ( $\geq 7$  cm)** likely at isolated places of Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated pockets of Uttar Pradesh, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Hot & Humid conditions** very likely at isolated pockets of Coastal Karnataka.



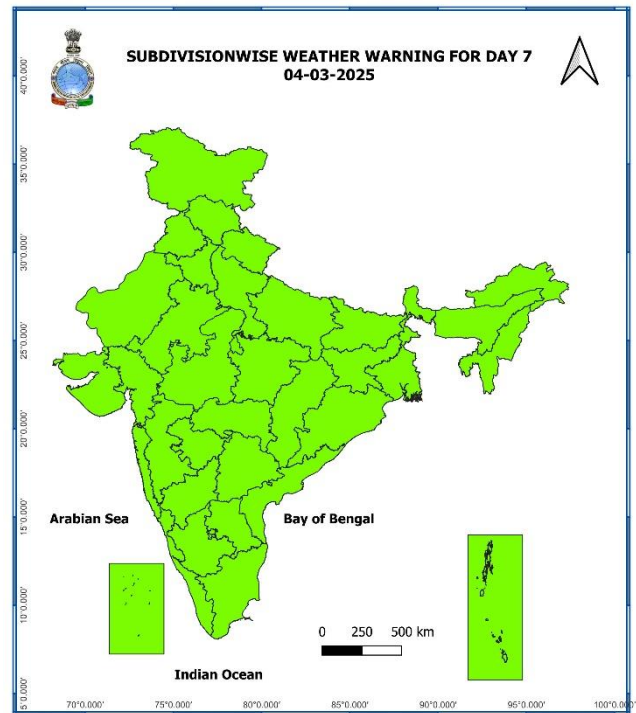
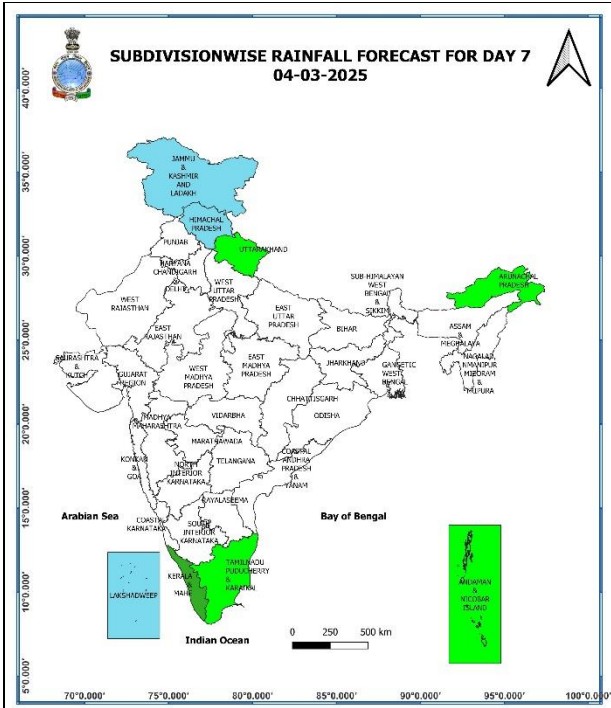
**02<sup>nd</sup> March (Day 5):**

❖ **No Weather Warning.**



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

❖ **No Weather Warning.**



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

❖ **No Weather Warning.**

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

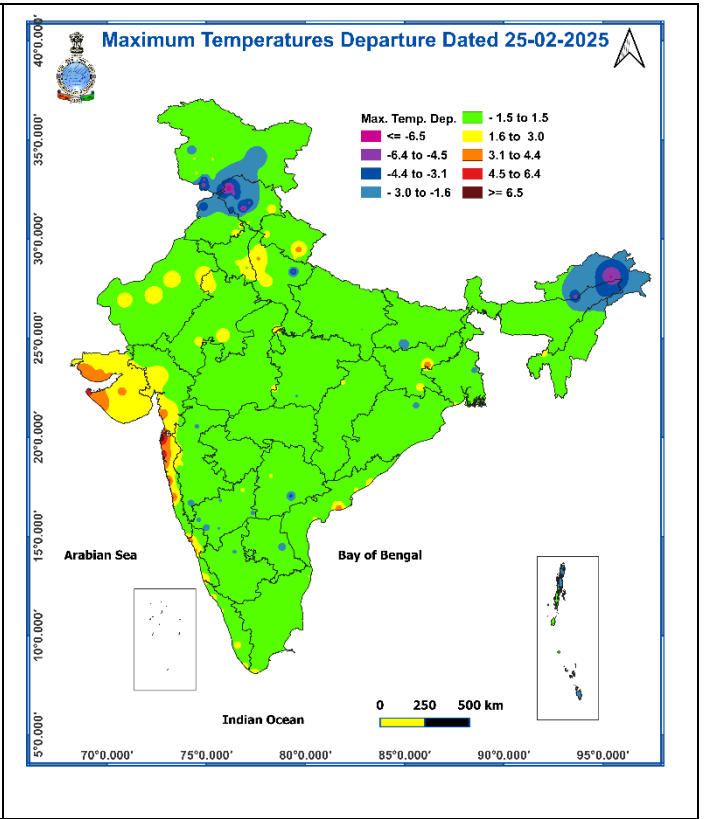
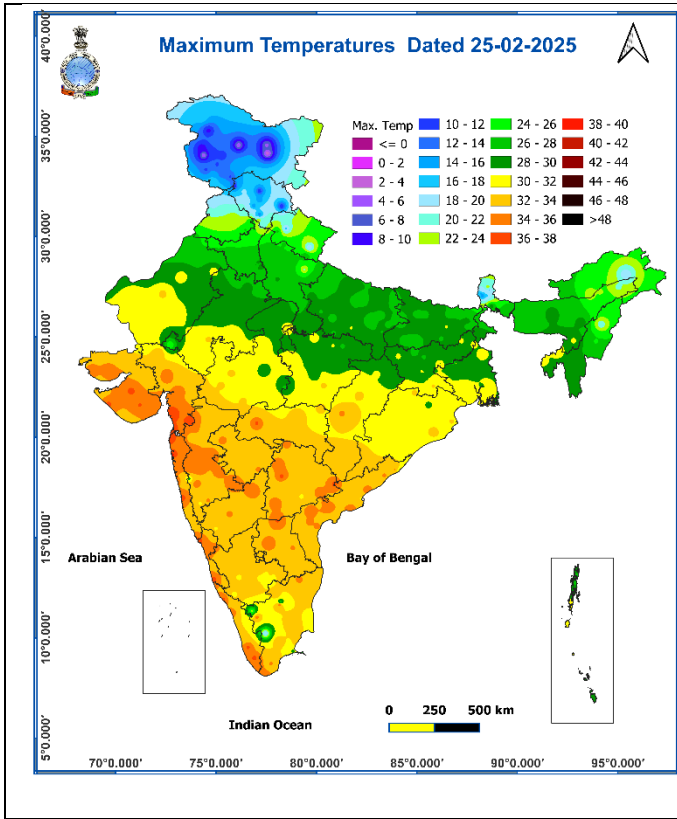
- ❖ **Scattered to fairly widespread rainfall/snowfall** likely over Western Himalayan region.
- ❖ **Isolated to scattered rainfall** likely over plains of Northwest India, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Andaman & Nicobar Islands.

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.

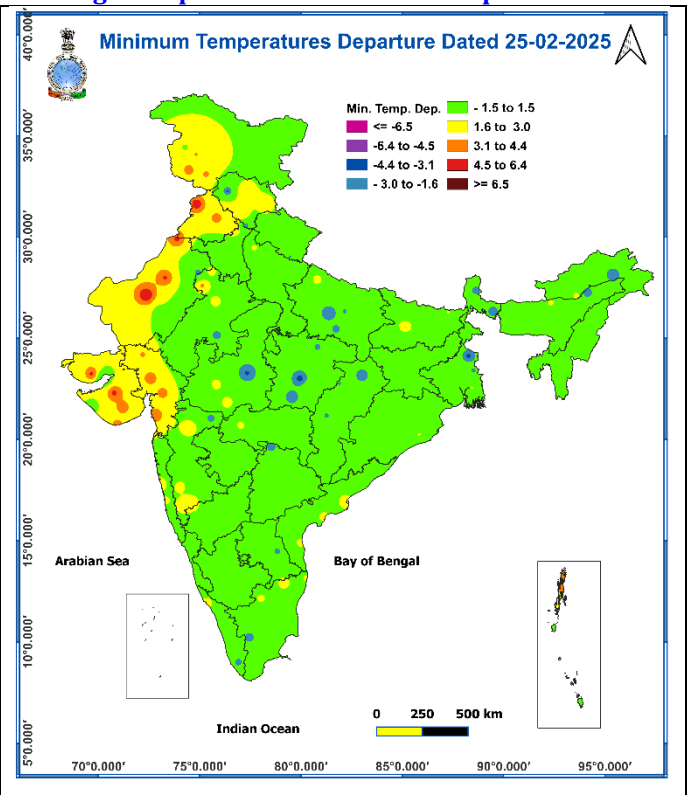
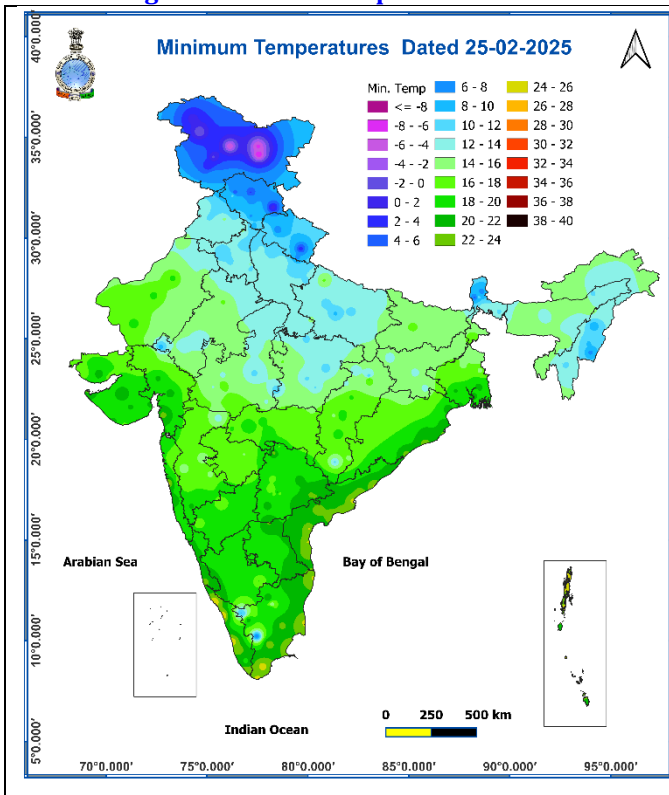
**Fig. 1: Maximum Temperatures**

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



**Fig. 3: Minimum Temperatures**

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



## Agromet advisories for likely impact of Heavy Rainfall/Snowfall/Heat Wave

- Complete harvesting of matured rapeseed in **Uttarakhand** and cole crops in **Himachal Pradesh**.
- Make provision for draining out excess water from the standing crop fields in **Andaman & Nicobar, Jammu and Kashmir, Himachal Pradesh and Uttarakhand**. In case of heavy snowfall, shake the fruit bearing trees to remove snow immediately from the branches.
- 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 for avoiding lodging.
- Apply light and frequent irrigation to the standing crops in the evening to protect them from low temperature stress or cold injuries in **Konkan, Kerala and Coastal Karnataka**.

### Livestock

- Keep the animals inside the shed during heavy rainfall and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.

## Impact & Action Suggested due to heavy rainfall/ snowfall over Jammu & Kashmir & Himachal Pradesh during 26<sup>th</sup>-28<sup>th</sup> and Uttarakhand on 27<sup>th</sup> & 28<sup>th</sup> February.

### A. Impact Expected

- ❖ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ❖ Occasional reduction in visibility due to heavy rainfall.
- ❖ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ❖ Minor damage to kutcha roads.
- ❖ Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides
- ❖ Damage to horticulture and standing crops in some areas due to inundation.
- ❖ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

### B. Action Suggested

- ❖ Check for traffic congestion on your route before leaving for your destination.
- ❖ Follow any traffic advisories that are issued in this regard.
- ❖ Avoid going to areas that face the water logging problems often.
- ❖ Avoid staying in vulnerable structure.

## Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm over Northwest India during 26<sup>th</sup> -28<sup>th</sup> February

### 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:

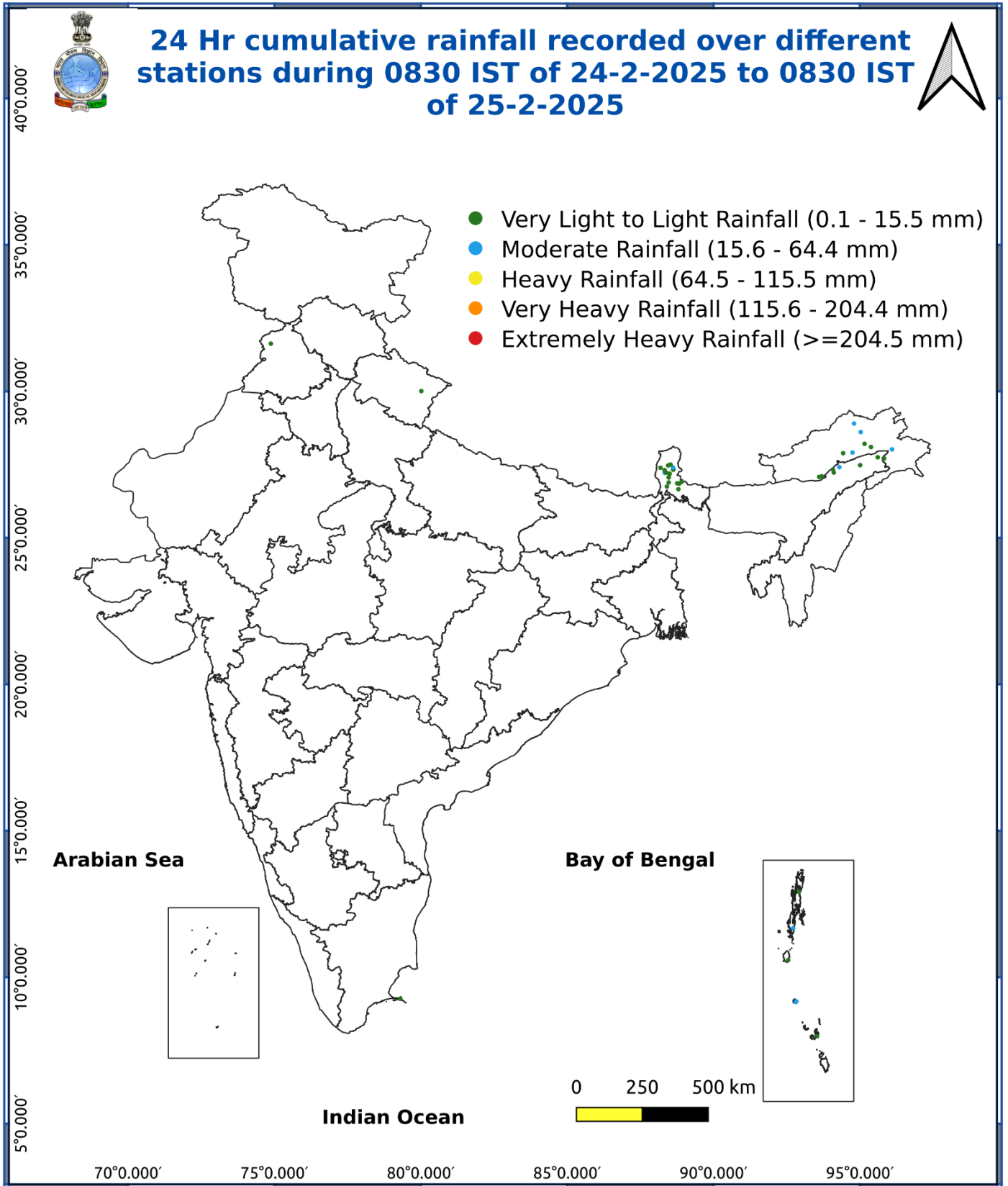
- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the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

## Impact expected and action suggested due Heat Wave conditions over Konkan, coastal Karnataka and North Kerala during next 2-3 days.

### Yellow alert Areas:

- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

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



\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
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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)