

Monday, January 6, 2025  
Time of Issue: 0810 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems, Forecast and warning:

- ❖ A Western disturbance is now seen as a trough in lower to upper tropospheric levels with its axis at 3.1 km above mean sea level runs roughly along Long. 71°E to the north of Lat. 25°N. An induced cyclonic circulation lies over East Rajasthan & neighbourhood in lower tropospheric levels. It is very likely to cause
  - ✓ Fairly widespread to widespread light to moderate rainfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh till 06<sup>th</sup> January with Isolated **heavy rainfall/ snowfall** very likely over Himachal Pradesh on 06<sup>th</sup> January. Light to moderate rainfall accompanied with thunderstorm and lightning very likely over Haryana-Chandigarh-Delhi and West Uttar Pradesh on 06<sup>th</sup> January.
  - ✓ Light to moderate rainfall at many places likely over Northeastern states on 07<sup>th</sup> & 08<sup>th</sup> January.
- ❖ A fresh Western Disturbance is likely to affect Northwest India from 10-12<sup>th</sup> January. Under its influence, Light to moderate rainfall/snowfall likely over Western Himalayan region and light rainfall over the plains of Northwest India during the same period.

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

##### Temperature Conditions during past 24 hours till 0830 hours IST of 05<sup>th</sup> January:

- ❖ Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladakh; **0-5°C** over Himachal Pradesh; **6-10°C** over many parts of Northwest, Central India; **10-14°C** over many parts of East & West India. The lowest minimum temperature of **4.0°C** was reported at **Mandla (East Madhya Pradesh)** over the plains of the country. There had been rise in minimum temperatures by 1-3°C over the major parts of the country.

##### Forecast of temperature:

- ❖ Fall in minimum temperatures by 4-5°C likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during next 4-5 days.
- ❖ No significant change in minimum temperatures likely over northwest, Central & West India during next 3-4 days.

##### Dense Fog Warnings:

**Dense fog conditions** to prevail during night/early morning hours in some parts of Punjab & Haryana Chandigarh during 06<sup>th</sup>-08<sup>th</sup>; in isolated pockets of Punjab & Haryana, Chandigarh on 09<sup>th</sup>; Uttar Pradesh & Rajasthan during 06<sup>th</sup> -08<sup>th</sup>, West Bengal & Sikkim, Jharkhand on 06<sup>th</sup>; Bihar on 06<sup>th</sup>; Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura on 06<sup>th</sup> January.

##### Fishermen Warnings:

Fishermen are advised not to venture into Southwest Arabian Sea on 06<sup>th</sup> January.

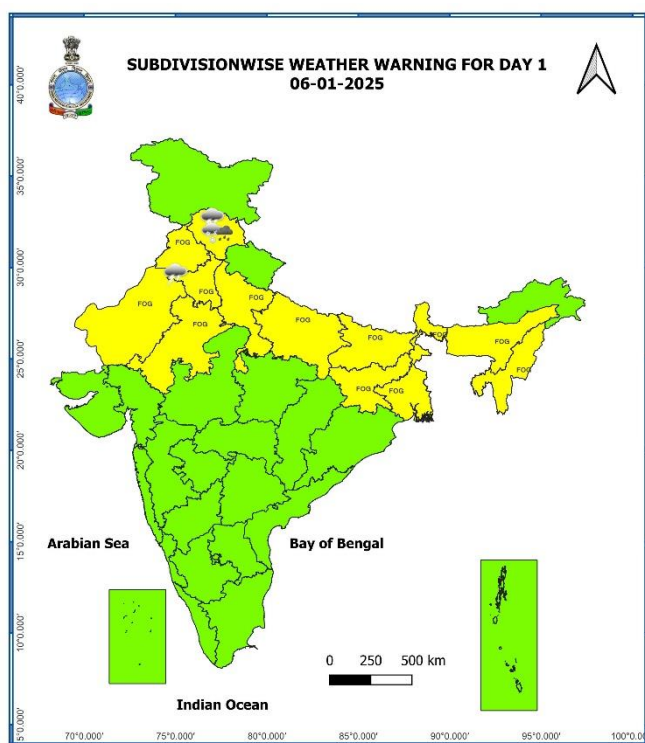
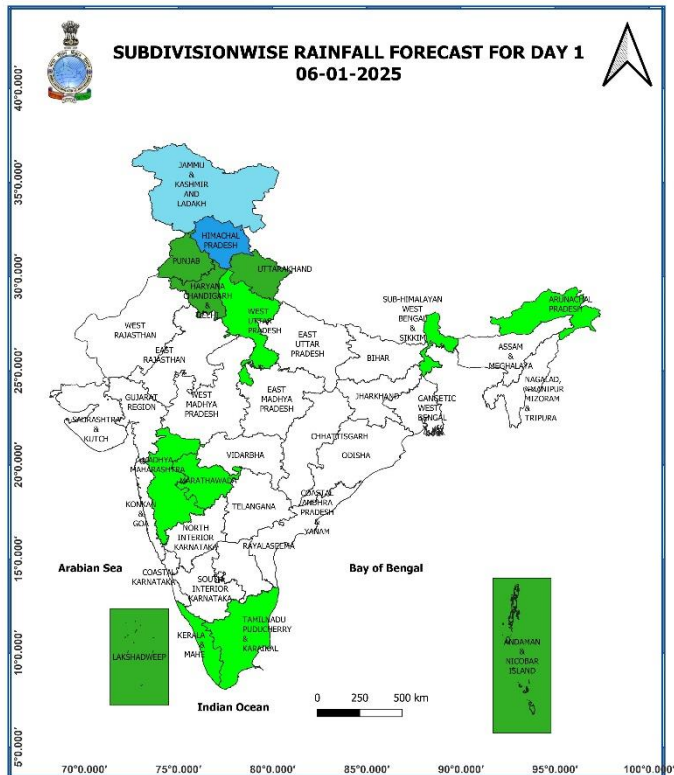
## Main Weather Observations:

- ❖ **Rainfall/Snowfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over Lakshadweep.
- ❖ **Heavy rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad**: Gulmarg -2; Kupwara -1.
- ❖ **Fog reported** (at 0530 hours IST of today): **Dense to very dense fog** reported in isolated pockets of East Uttar Pradesh, Punjab, East Madhya Pradesh and Bihar; **Moderate to dense fog** in isolated pockets of West Bengal; **Moderate fog** in isolated pockets of West Uttar Pradesh, West Rajasthan, Jharkhand and Jammu-Kashmir.
- ❖ **Visibility reported** (at 0530 hours IST of today) ( $\leq 200$  meter): **East Uttar Pradesh**: Lucknow Airport, Bahraich & Sultanpur-00, Varanasi -50, Kanpur-100, Prayagraj-200; **West Uttar Pradesh**: Hindon IAF & Jhansi 200 each; **Punjab**: Amritsar-00; **West Rajasthan**: Suratgarh IAF & Bikaner -200 each; **East Madhya Pradesh**: Satna-00; **Jharkhand**: Daltonganj-200; **Bihar**: Purnea & Bhagalpur-00 each, Patna-200; **West Bengal**: Kolkata-50, Digha & Diamond Harbour-200 each; **Jammu-Kashmir**: Srinagar Airport -200.
- ❖ Yesterday, **Cold day to severe cold day conditions** prevailed in some parts of Bihar.
- ❖ **Minimum Temperature Departures (as on 05-01-2025)**: Minimum temperatures were **Markedly above normal ( $5.1^{\circ}\text{C}$  or above)** at isolated places over East Rajasthan; **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, West Rajasthan, Gujarat state, West Madhya Pradesh; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at isolated places over Uttar Pradesh, Haryana-Chandigarh-Delhi, East Madhya Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Bihar, Gangetic West Bengal, Odisha, Uttarakhand. These were **appreciably below normal ( $-3.1^{\circ}\text{C}$  to  $-5.0^{\circ}\text{C}$ )** at isolated places over Vidarbha, Telangana; **below normal ( $-1.6^{\circ}\text{C}$  to  $-3.0^{\circ}\text{C}$ )** at a few places over Vidarbha; at isolated places over Tamil Nadu, Puducherry & Karaikal, Chhattisgarh, Marathwada and near normal over rest part of the country (Fig. 4). Yesterday, the **lowest minimum temperature** of  $4.0^{\circ}\text{C}$  was reported at **Mandla (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 05-01-2025)**: Maximum temperatures were **Markedly above normal ( $5.1^{\circ}\text{C}$  or above)** at many places over Himachal Pradesh; at isolated places over Uttarakhand; **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Assam & Meghalaya, Arunachal Pradesh, West Madhya Pradesh and Chhattisgarh; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at most places over Marathwada & Nagaland, Manipur, Mizoram & Tripura; at a few places over Sub-Himalayan West Bengal & Sikkim; at isolated places over Haryana-Chandigarh-Delhi, Rayalaseema, Odisha, Konkan & Goa, Gujarat state, Telangana, North Interior Karnataka. These were **markedly below normal ( $-5.1^{\circ}\text{C}$  or less)** at isolated places over West Uttar Pradesh & Bihar; **appreciably below normal ( $-3.1^{\circ}\text{C}$  to  $-5.0^{\circ}\text{C}$ )** at isolated places over East Madhya Pradesh **below normal ( $-1.6^{\circ}\text{C}$  to  $-3.0^{\circ}\text{C}$ )** at isolated places over Haryana-Chandigarh and near normal over rest part of the country (Fig. 2). Yesterday, the highest maximum temperature of  $35.2^{\circ}\text{C}$  was reported at **Kannur Airport (Kerala)** over the plains of the country.

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

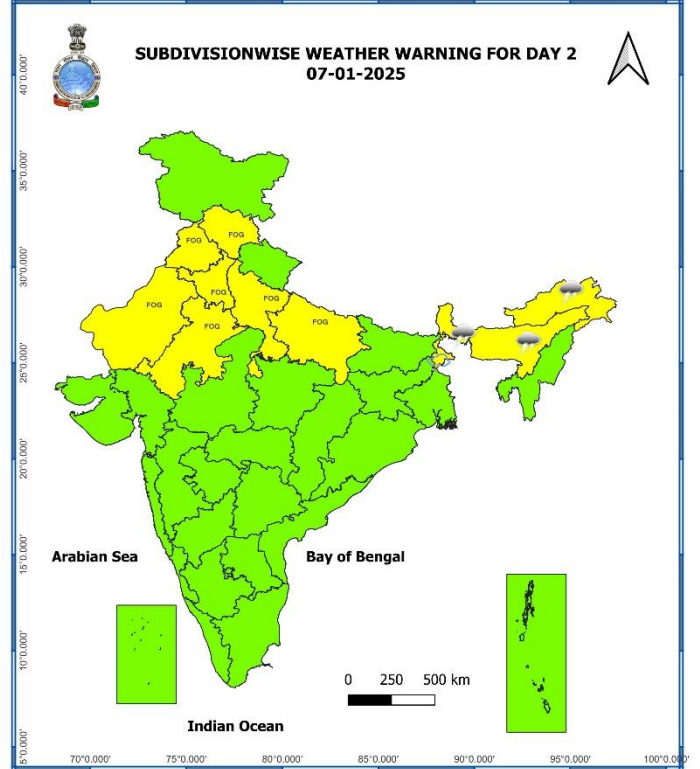
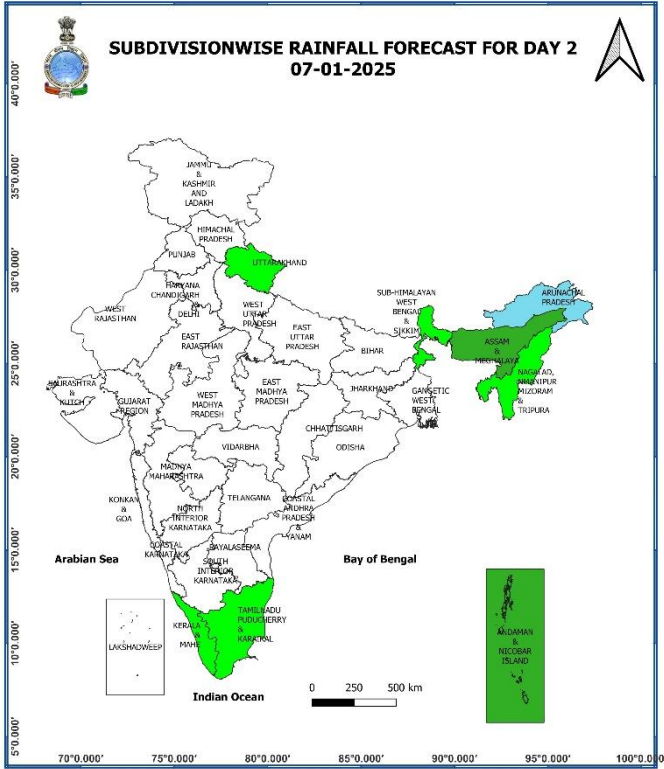
- ❖ The **Western disturbance** as a trough between 3.1 km & 12.6 km above mean sea level with its axis at 3.1 km above mean sea level now runs roughly along Long. 71°E to the north of Lat. 25°N.
- ❖ The induced **cyclonic circulation** now lies over East Rajasthan & neighbourhood and extends upto 1.5 km above mean sea level.
- ❖ The **trough** now runs from West Uttar Pradesh to northeast Arabian Sea across the induced cyclonic circulation over East Rajasthan & neighbourhood at 1.5 km above mean sea level.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 120 knots at 12.6 km above mean sea level continues to prevail over North India.
- ❖ A fresh **Western Disturbance** is likely to affect northwest India from 10<sup>th</sup> January, 2025.

**Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 13<sup>th</sup> January, 2025)**



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

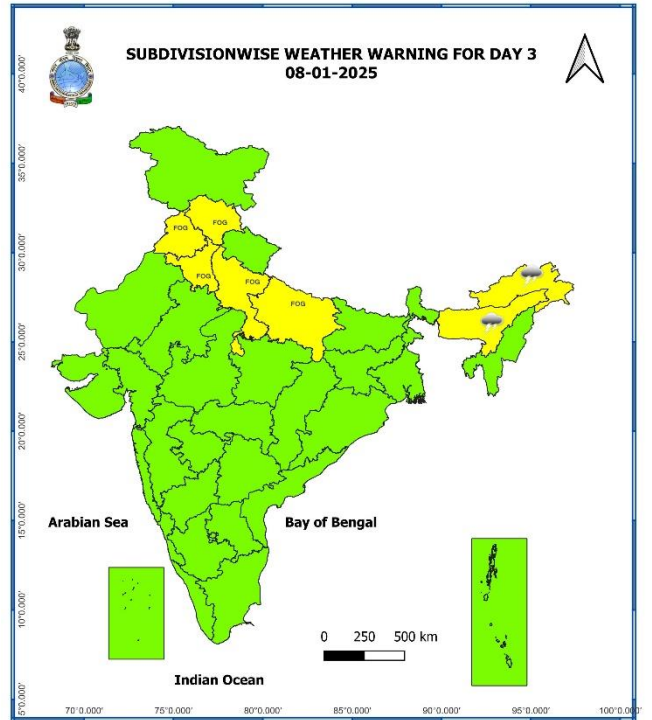
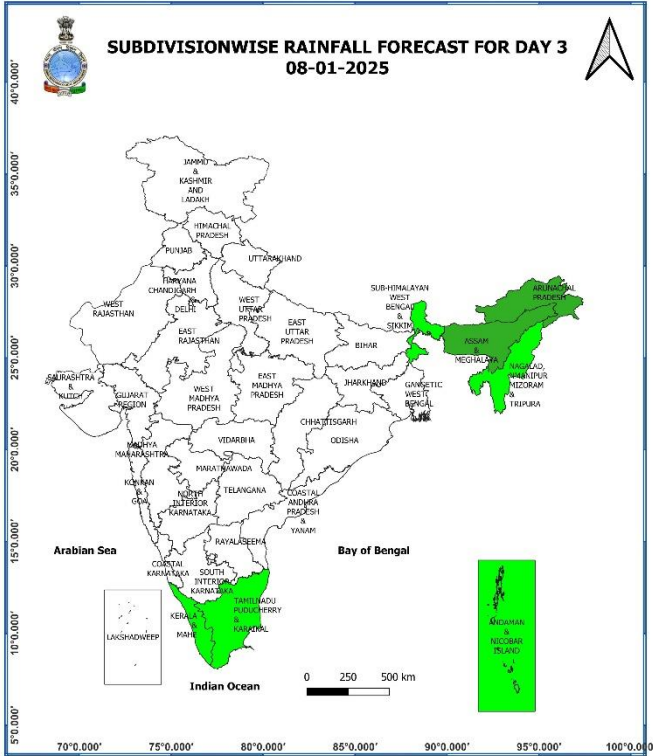
- ❖ **Heavy Rainfall ( $\geq 7\text{cm}$ )/snowfall ( $\geq 70\text{ cm}$ )** very likely at isolated places over Himachal Pradesh.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Haryana-Chandigarh-Delhi and Himachal Pradesh.
- ❖ **Dense fog conditions** very likely in isolated pockets of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan, West Bengal & Sikkim, Bihar, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- ❖ **Squally wind with speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail, along and off Somalia coast & adjoining southwest Arabian sea. Fisherman are advised not to venture in to these areas.



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

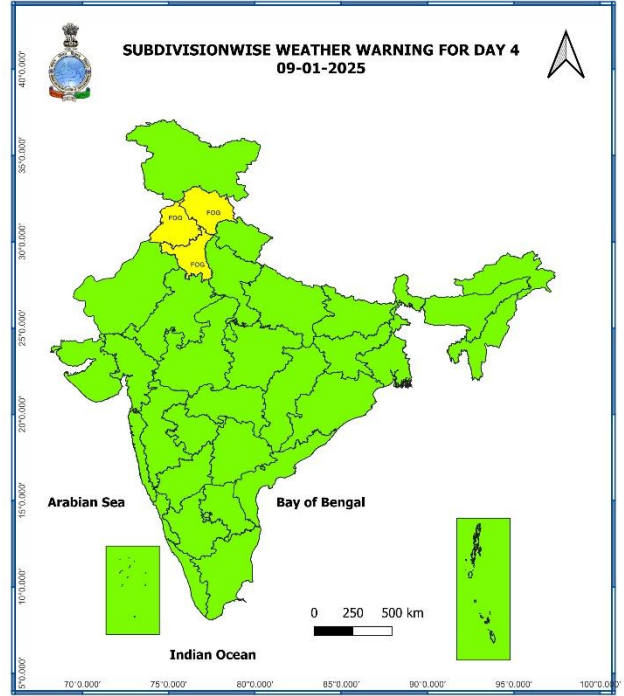
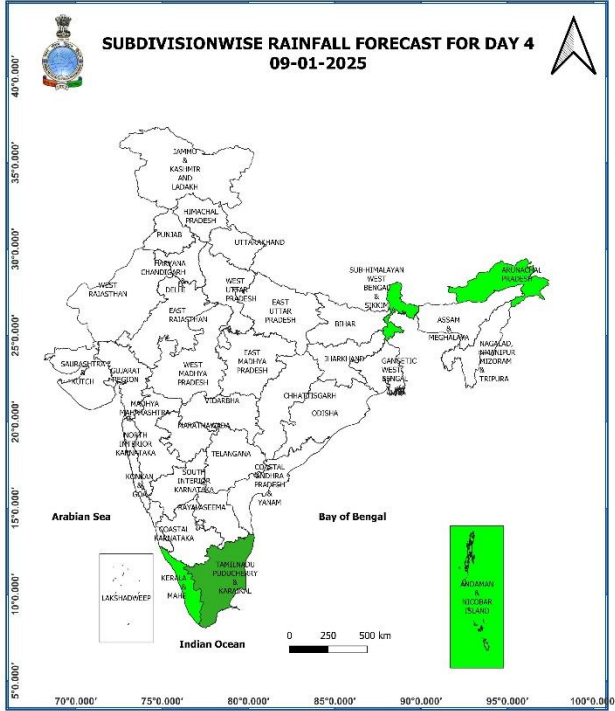
- ❖ **Dense fog** likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan in night/morning hours.
- ❖ **Thunderstorm accompanied with hailstorm & lightning** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim; **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya.

\* 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)



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

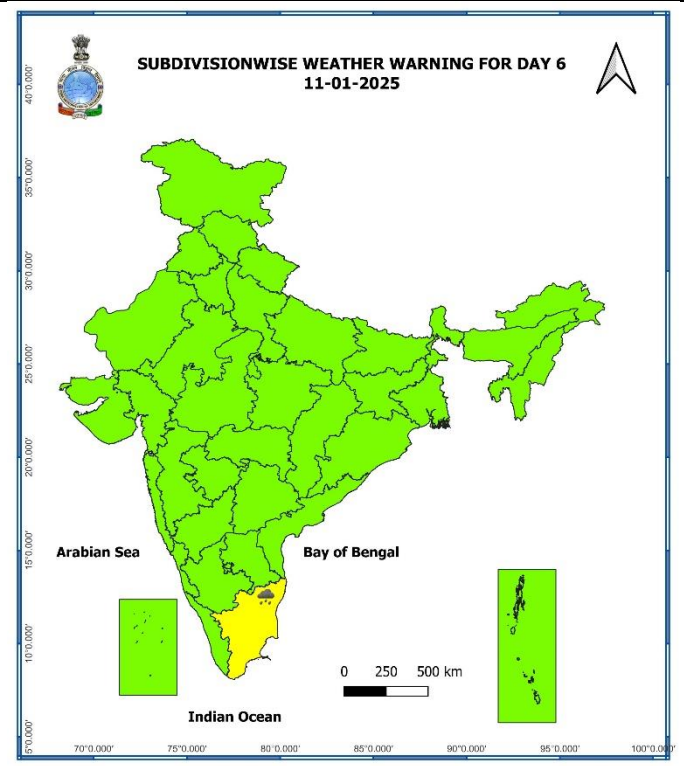
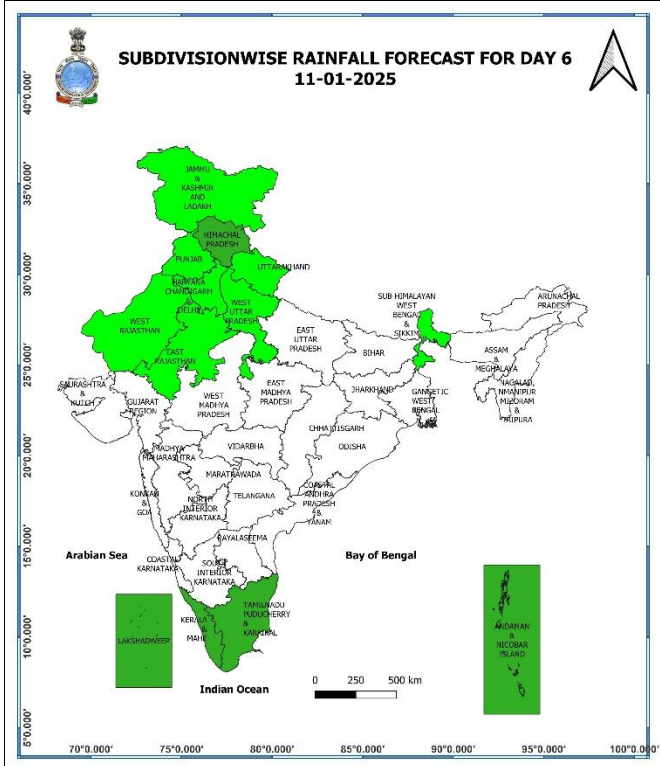
- ❖ **Dense fog** likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh in night/morning hours.
- ❖ **Thunderstorm with lightning** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya.



### 09<sup>th</sup> January (Day 4):

- ❖ **Dense fog** likely in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi in night/morning hours.

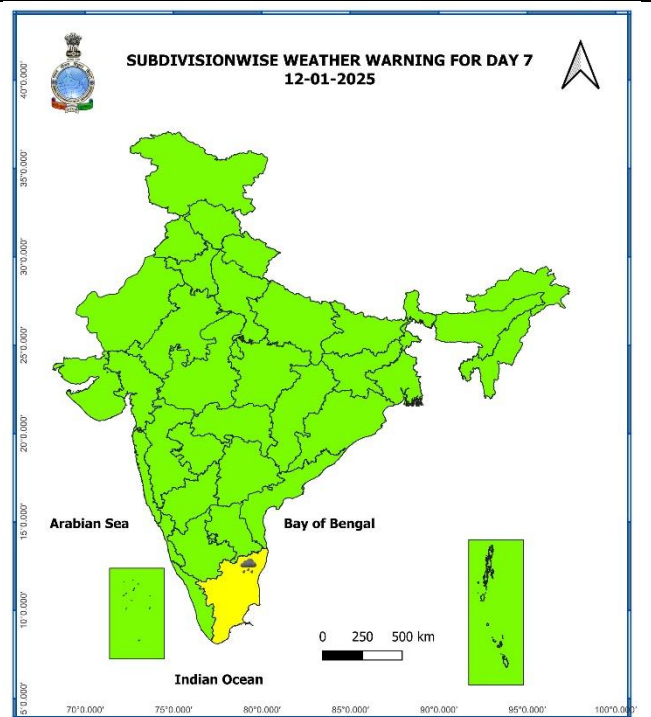
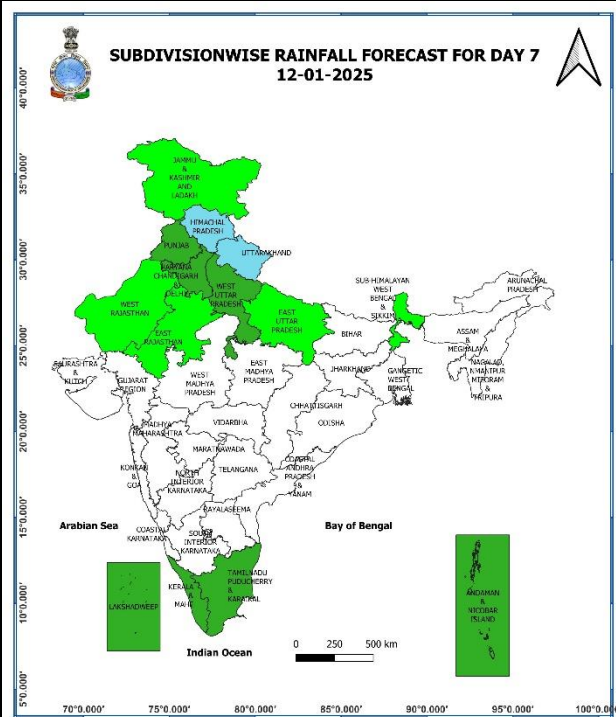




**11<sup>th</sup> January (Day 6):**

❖ **Heavy Rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.

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### 12<sup>th</sup> January (Day 7):

- ❖ **Heavy Rainfall (≥7cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.

### Weather Outlook for subsequent 3 days (During 13<sup>th</sup> January– 15<sup>th</sup> January, 2025)

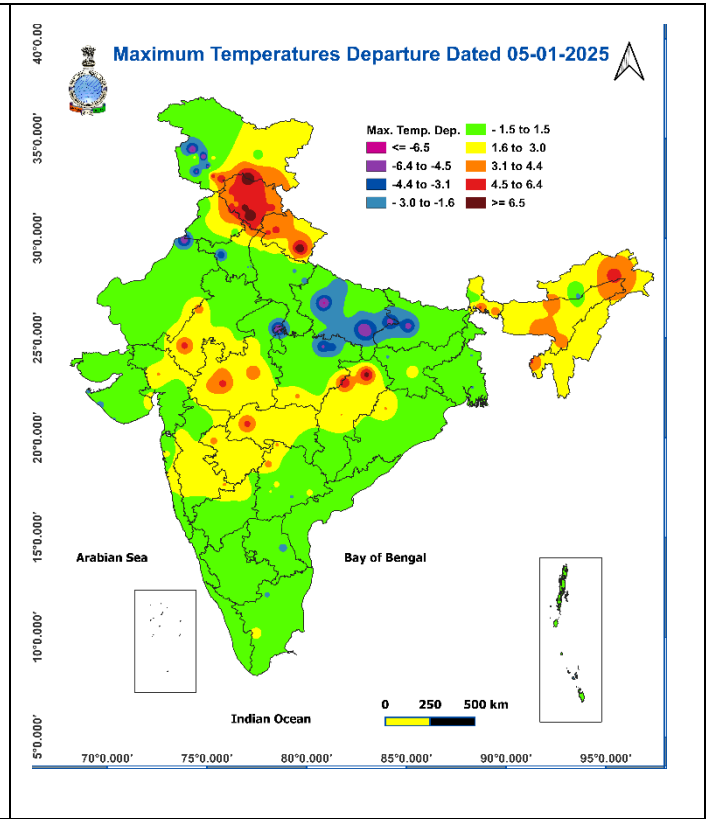
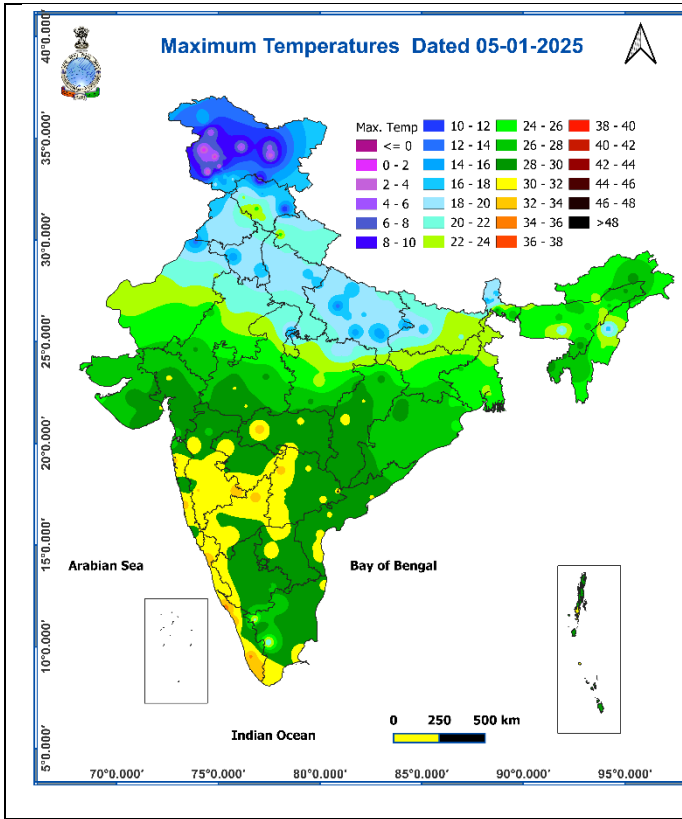
- ❖ Isolated to scattered light to moderate rainfall over Northwest, Central India and South Peninsular India.
- ❖ Isolated to scattered rainfall/snowfall over Himalayan Region.
- ❖ Mainly dry weather will prevail over rest parts of country.

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

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

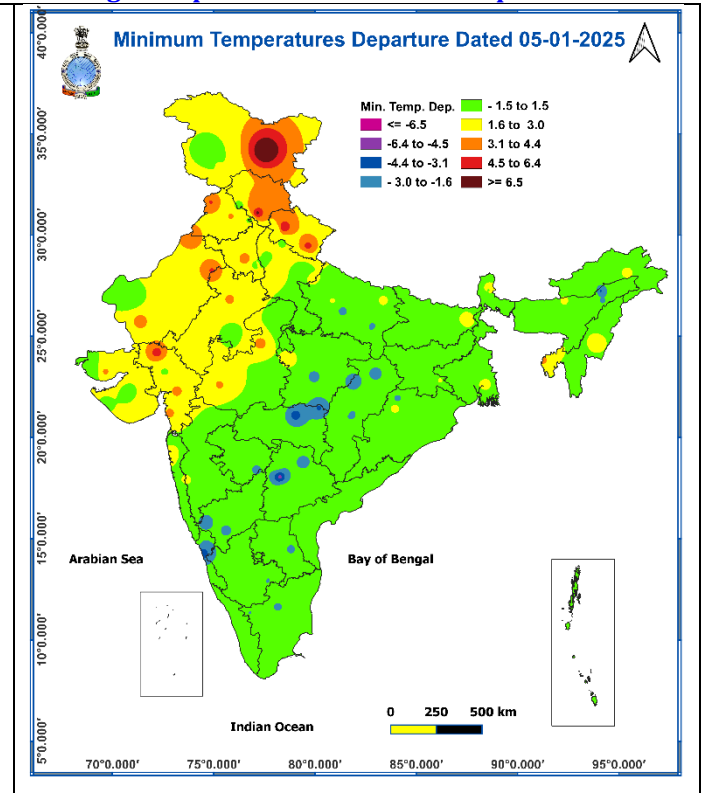
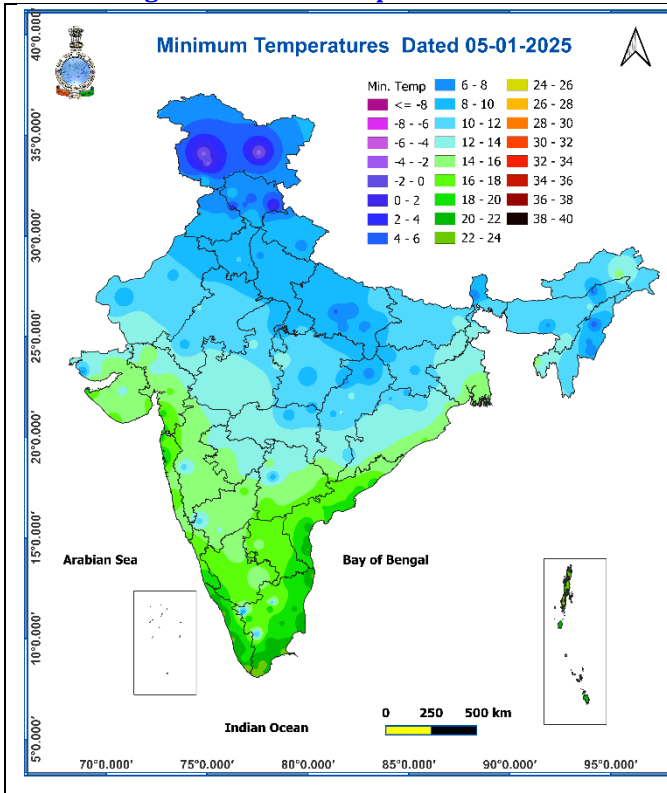
**Fig. 1: Maximum Temperatures**

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



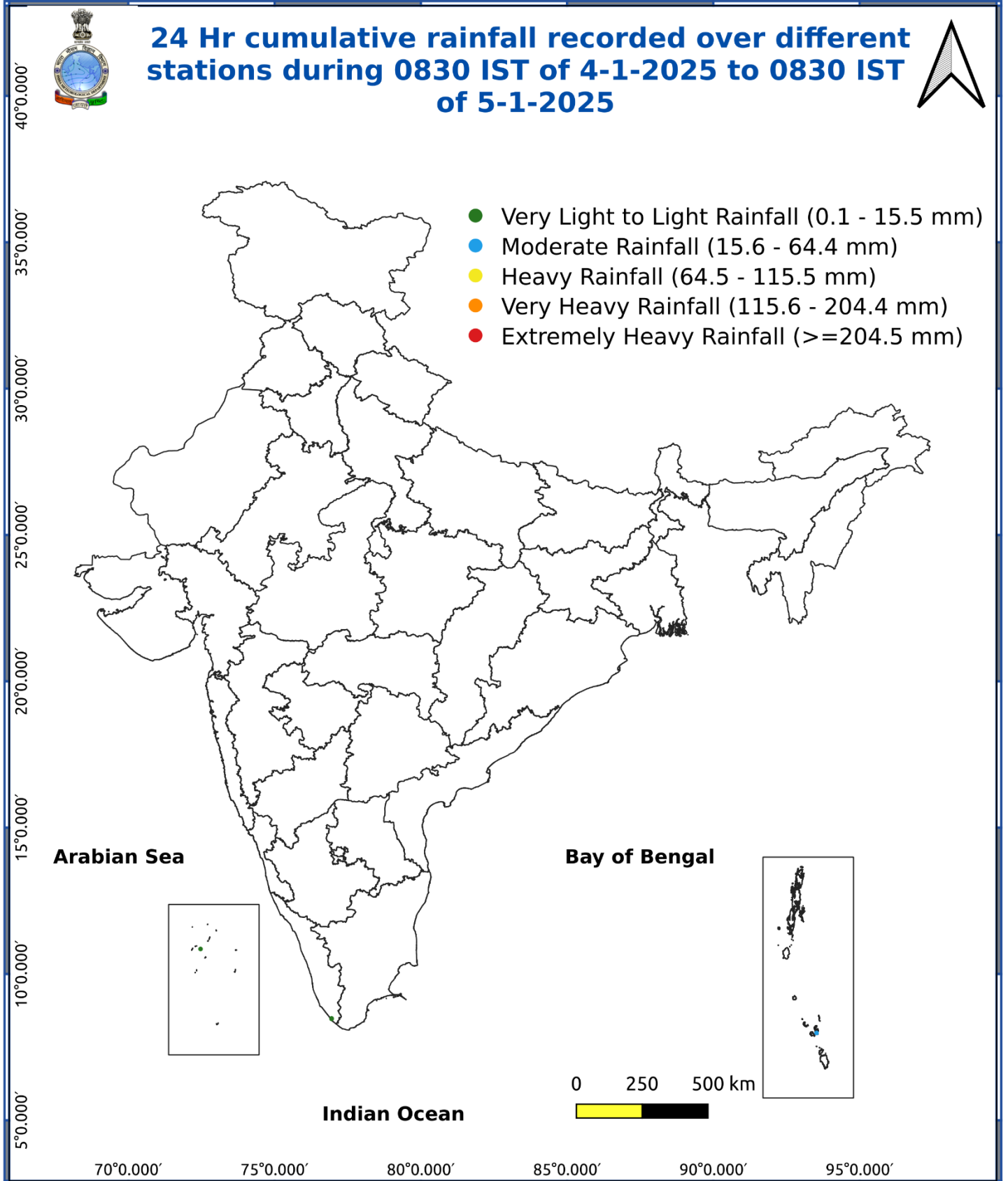
**Fig. 3: Minimum Temperatures**

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



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



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## Impact due to heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 05<sup>th</sup>; over Himachal Pradesh on 05<sup>th</sup> & 06<sup>th</sup> January.

### Impact Expected

- ❖ Temporary disruption of Surface & Air transportation particularly on 5th January.
- ❖ Chances of Landslides/Mudslides and shooting stones over vulnerable places.
- ❖ In view of fresh snowfall, sub-freezing temp & icy conditions over roads, Tourists/travellers/Transporters are advised to plan accordingly & follow Admin/Traffic advisory.

### 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 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 Day/Severe Cold day conditions

- ❖ An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- ❖ Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- ❖ Frostbite can occur due to prolonged exposure to cold. The skin turns pale, hard and numb and eventually black blisters appear on exposed body parts such as fingers, toes, nose and or earlobes. Severe frostbite needs immediate medical attention and treatment.
- ❖ Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

#### Action suggested:

- ❖ Wear several layers of loose fitting, light weight; warm woollen clothing.
- ❖ Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm Woolen clothing rather than one layer of heavy cloth.
- ❖ Eat vitamin-C rich fruits & vegetable and drink sufficient fluids preferably warm fluids to maintain adequate immunity.
- ❖ Avoid or limit outdoor activities.
- ❖ Keep dry, if wet, change cloths immediately to prevent loss of body heat. Wear insulated/waterproof shoes.
- ❖ Warm the affected area of the body slowly with lukewarm water; do not rub the skin vigorously.
- ❖ If the affected skin area turns black, immediately consult a doctor.
- ❖ Maintain ventilation while using Heaters to avoid inhaling toxic fumes.
- ❖ Take safety measures while using electrical and gas heating devices.
- ❖ Extreme care needed for vulnerable people.
- ❖ Seek medical attention as soon as possible for someone suffering from frostbite/ Hypothermia.
- ❖ Protect livestock from cold weather.

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

- Make necessary arrangements to drain out excess water from wheat, pulses, mustard, pea, vegetables and other standing crops and fruit orchards in **Jammu & Kashmir**; from wheat, mustard, garden pea, potato, vegetables and fruit orchards in **Himachal Pradesh**. In case of heavy snowfall, shake the fruit bearing trees to remove snow immediately from the branches.
- Provide mechanical support to horticultural crops and staking to vegetables.
- In **Telangana**, 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

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

## 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)