

Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 30<sup>th</sup> December, 2024

Time of Issue: 1330 hours IST

**Subject: Dense to very dense fog and cold day conditions likely over Northwest India during next 2-3 days.**

**i. Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)**

- ❖ **Cold day to severe cold day conditions** observed in isolated pockets of Haryana, Chandigarh and Rajasthan.
- ❖ **Very dense fog (visibility < 50 m)** reported in isolated pockets of Jammu-Kashmir, Punjab, East Rajasthan, Himachal Pradesh and Haryana-Chandigarh; **dense fog (visibility 50-200 m)** reported in isolated pockets of Meghalaya and West Rajasthan.
- ❖ **Visibility reported (< 50 m)** (in meter): **Jammu-Kashmir:** Jammu airport 0; **Punjab:** Amritsar, Pathankot 0 each; **Haryana:** Ambala 0, **East Rajasthan:** Ajmer 0; **Himachal Pradesh:** Sundernagar 0, Bilaspur 100; **Chandigarh** 40; **West Rajasthan:** Jaisalmer 50; **Meghalaya:** Barapani 100
- ❖ **Heavy rainfall** recorded at isolated places over Tamil Nadu.

**Weather Systems, Forecast and warning (Annexure II & III):**

- ❖ A Western disturbance seen as a trough in lower & middle tropospheric westerlies runs roughly along Long. 60°E to the north of Lat. 34°N. Another Western Disturbance likely to affect northwest India from night of 4<sup>th</sup> January. It is very likely to cause light isolated to scattered rainfall/snowfall over Western Himalayan region from 01<sup>st</sup> to 03<sup>rd</sup> and scattered to fairly widespread rainfall/snowfall on 04<sup>th</sup> & 05<sup>th</sup> January 2025.
- ❖ A **cyclonic circulation** lies over central parts of south Bay of Bengal & adjoining Equatorial Indian Ocean in lower tropospheric levels.

**ii. Temperature, Cold Wave and Fog Forecast:**

**Temperature Conditions during past 24 hours till 0830 hours IST of today (Annexure IV):**

- ❖ Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladakh; **6-12°C** over many parts of Northwest India; **12-18°C** over many parts of Central, West & East India. Today, the lowest minimum temperature of 5.3°C is reported at Chittorgarh (East Rajasthan) over the plains of the country.
- ❖ There has been a fall in minimum temperature by 1-2°C over some parts of Jammu-Kashmir-Ladakh and Himachal Pradesh; by 2-5°C over many parts of Madhya Pradesh, in some parts of East Rajasthan, Uttar Pradesh during past 24 hours and rise in minimum temperature by 1-3°C over some parts of East India, Saurashtra Kutch and West Rajasthan.
- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Rajasthan, West Madhya Pradesh, Gujarat State; **above normal (3°C to 5°C)** at many places over remaining parts of plains of North India, Central India, Maharashtra and near normal over rest parts of the country.

**Forecast of temperature:**

- ❖ No significant change in minimum temperatures likely over Western Himalayan region during next 2 days and gradual rise by 3-5°C thereafter.
- ❖ No significant change in minimum temperatures likely over plains of Northwest India during next 2 days and gradual rise by 2-3°C thereafter.
- ❖ Fall in minimum temperatures by 2-3°C likely over Central & East India during next 2-3 days and no significant change thereafter.
- ❖ Fall in minimum temperatures by 2-4°C likely over West India (except Gujarat State) during next 5 days.
- ❖ No significant change in minimum temperatures likely over Gujarat State during next 5 days.

### **Cold Wave Warnings:**

**Cold wave** conditions very likely in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 30<sup>th</sup> & 31<sup>st</sup> December.

### **Cold Day Warnings:**

**Cold Day to severe cold day** conditions very likely in isolated pockets of Haryana, Chandigarh and Rajasthan on 30<sup>th</sup> December.

**Cold Day** conditions very likely in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 30<sup>th</sup> & 31<sup>st</sup>, Punjab on 30<sup>th</sup>, Haryana, Chandigarh on 31<sup>st</sup> December, West Uttar Pradesh and north Madhya Pradesh during 30<sup>th</sup> December – 01<sup>st</sup> January.

### **Dense Fog Warnings:**

**Dense to Very dense fog conditions very likely** to prevail during late night hours in isolated pockets of Punjab, Haryana-Chandigarh on 30<sup>th</sup> December.

**Dense fog conditions** very likely to prevail during late night/early morning hours in isolated pockets of Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura till 31<sup>st</sup> December; Punjab, Haryana-Chandigarh 31<sup>st</sup> December & 01<sup>st</sup> January; Uttarakhand, Uttar Pradesh, Rajasthan and Sub-Himalayan West Bengal & Sikkim till 01<sup>st</sup> January; Himachal Pradesh till 02<sup>nd</sup> January.

### **Ground Frost Warnings:**

**Ground Frost** conditions very likely in isolated pockets of Himachal Pradesh during 30<sup>th</sup> December – 02<sup>nd</sup> January and Arunachal Pradesh on 30<sup>th</sup> & 31<sup>st</sup> December.

### **Fishermen Warnings (Annexure V):**

Fishermen are advised not to venture into Gulf of Mannar and adjoining Comorin area, over many parts of southwest Bay of Bengal and southern parts of southeast Bay of Bengal, along and off Sri Lanka coast on 30<sup>th</sup> & 31<sup>st</sup> December; adjoining Maldives area during 01<sup>st</sup>-03<sup>rd</sup> January.

### **iii. Weather conditions and forecast over Delhi/NCR during 30<sup>th</sup> Dec. 2024 to 02<sup>nd</sup> Jan. 2025 (Annexure VI)**

**For more details, kindly refer National Weather Bulletin:**

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**For District wise warnings refer:** <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

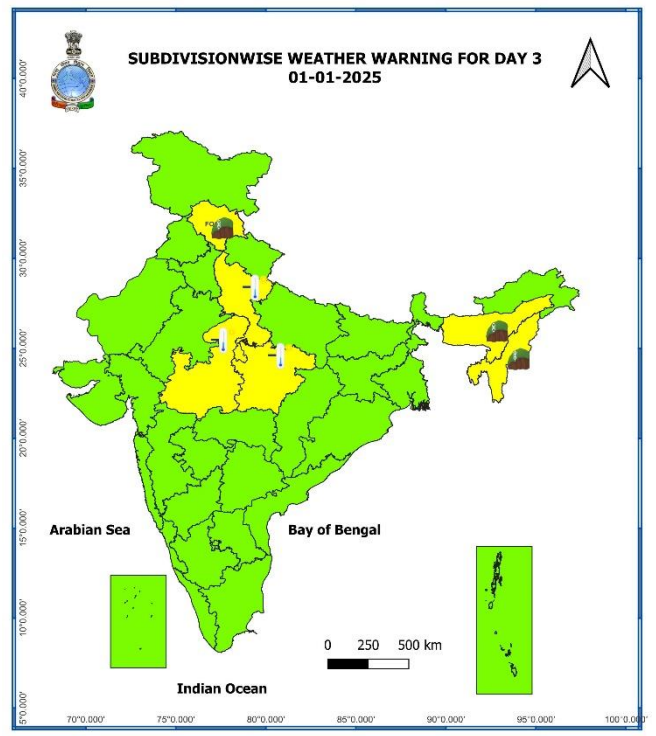
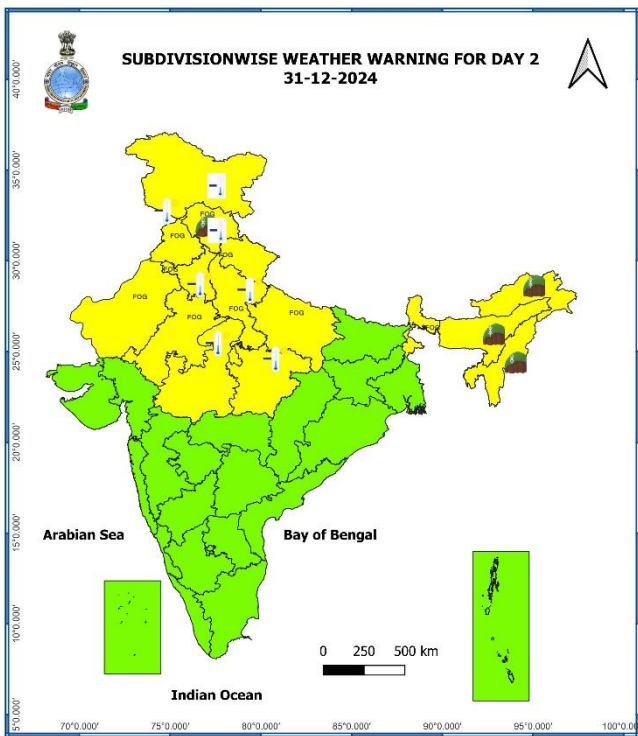
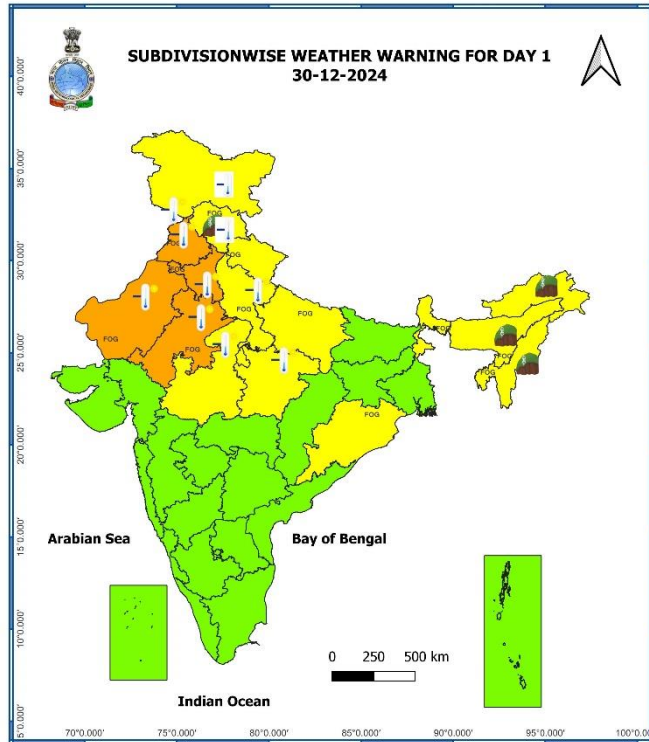
## **ANNEXURE I**

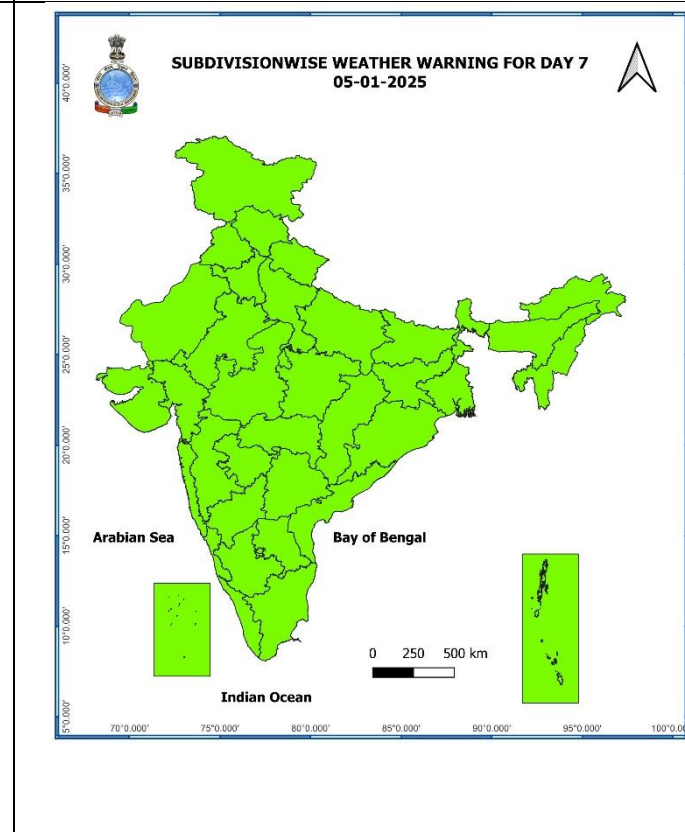
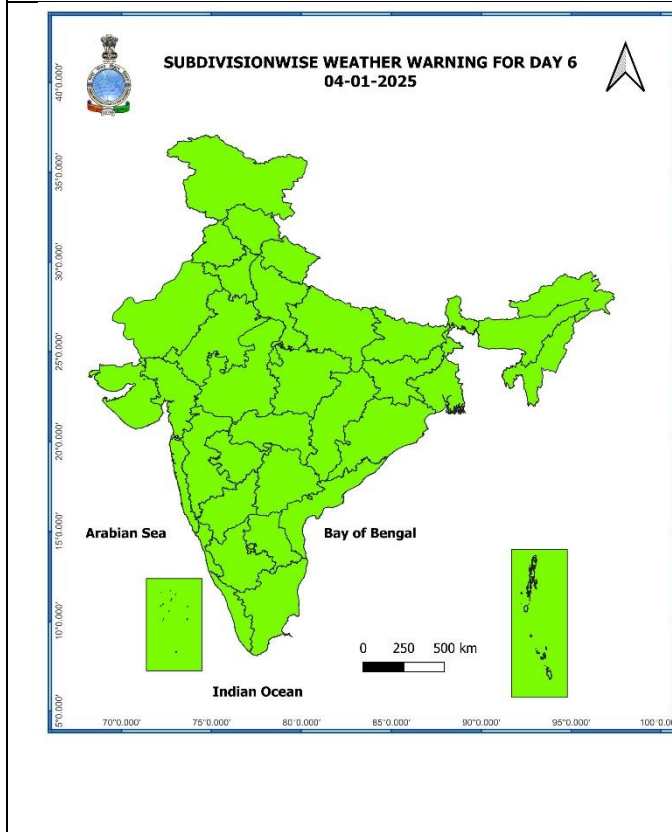
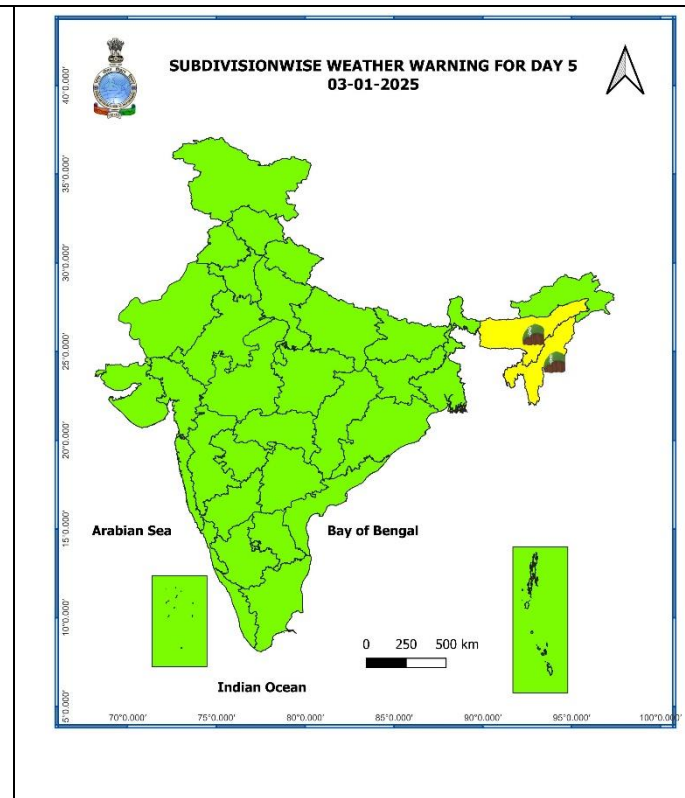
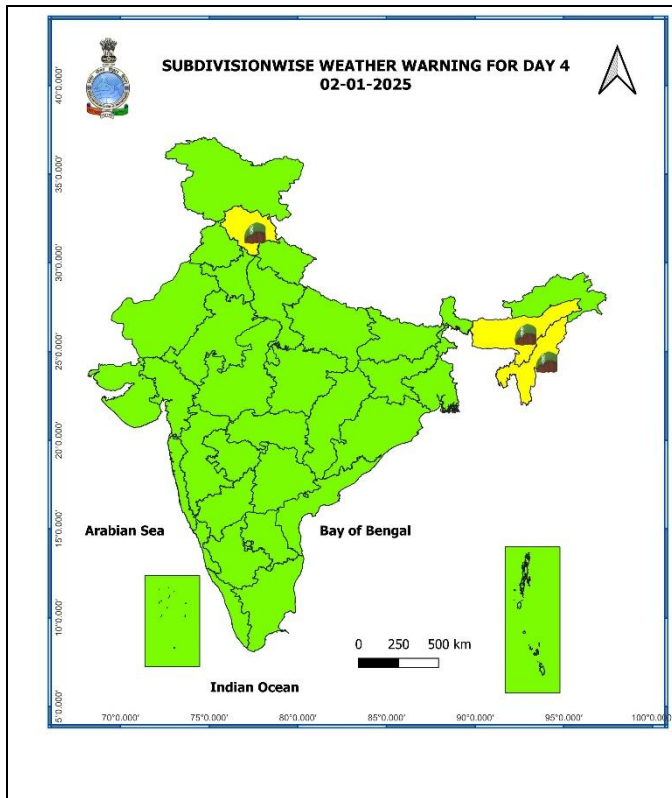
### **Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 30.12.2024 (in cm):**

- ❖ **Tamil Nadu:** Nagapattinam (dist Nagapattinam) 8, Velankanni (dist Nagapattinam) 7

7 Days Rainfall Forecast								
S. No.	Subdivision	30-Dec	31-Dec	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	SCT	ISOL	ISOL	ISOL	SCT	SCT
2	ARUNACHAL PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	ISOL	SCT
15	HIMACHAL PRADESH	DRY	DRY	DRY	ISOL	ISOL	ISOL	SCT
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	SCT	ISOL	SCT	FWS	FWS
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
35	KERALA & MAHE	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
36	LAKSHADWEEP	SCT	SCT	SCT	DRY	DRY	DRY	DRY

- As the lead period increases forecast accuracy decreases





- 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

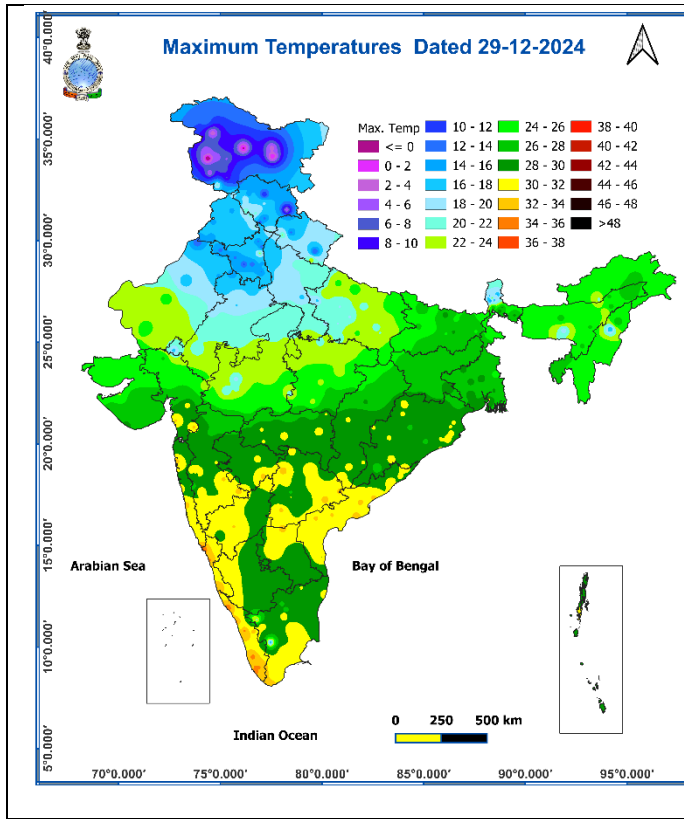


Fig. 2: Departure of Maximum Temperatures

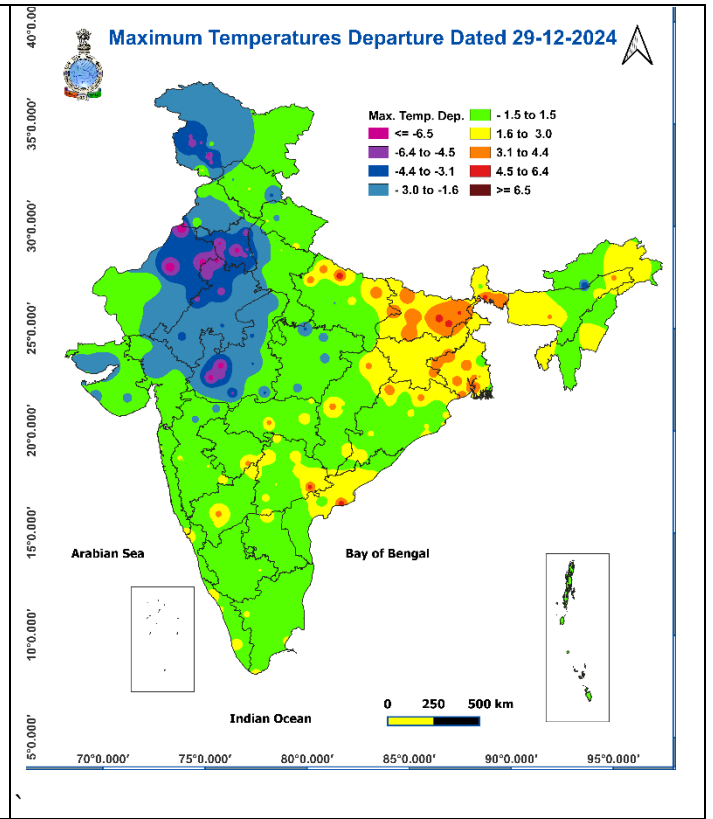


Fig. 3: Minimum Temperatures

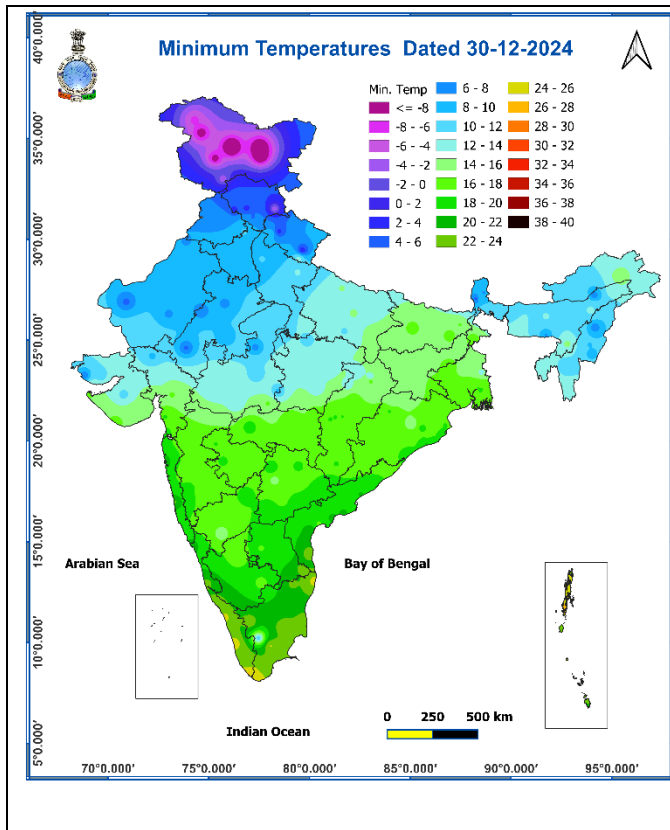
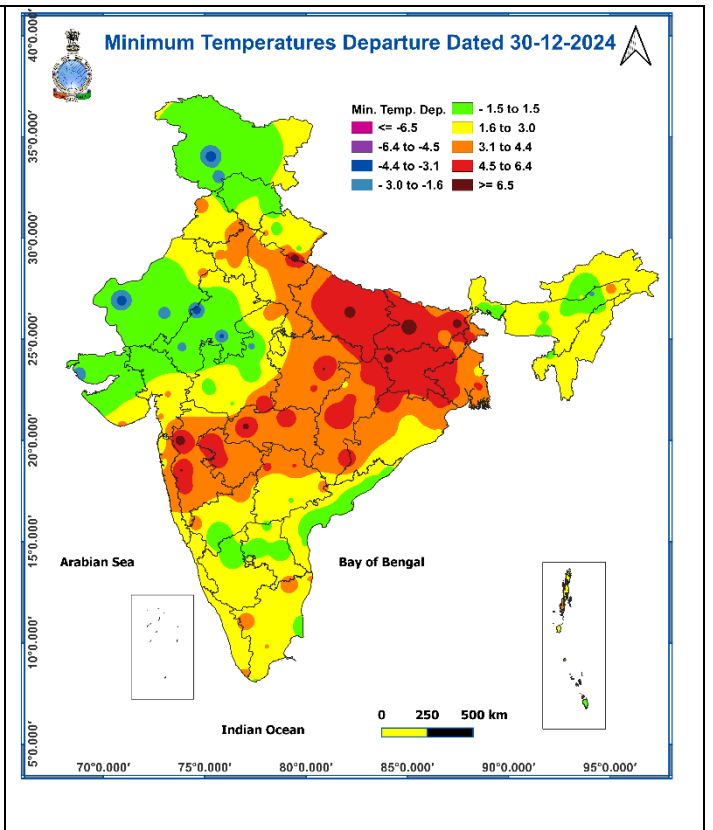
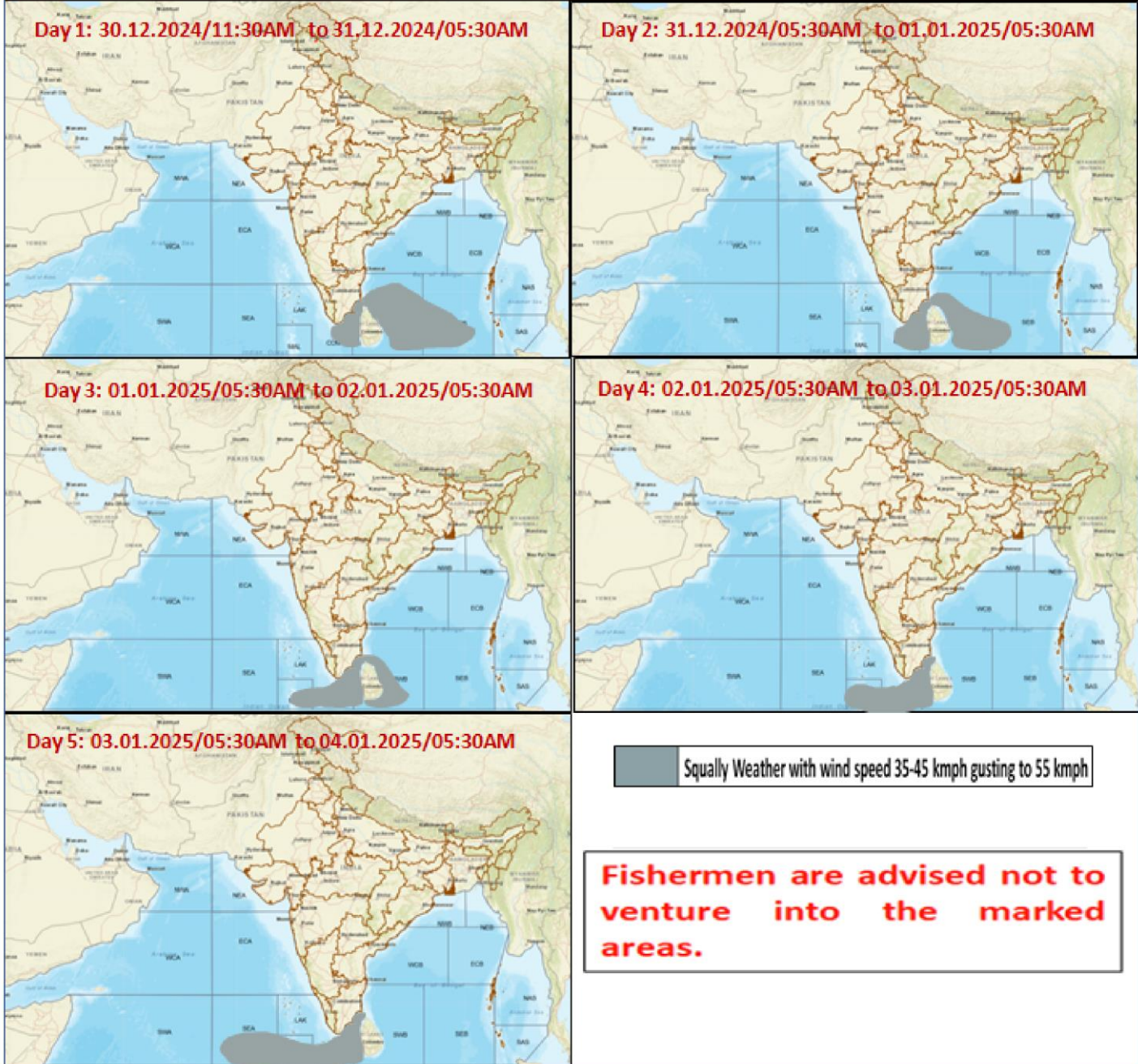


Fig. 4: Departure of Minimum Temperatures





## Fishermen Warning Graphics



**Weather forecast over Delhi/NCR during 30<sup>th</sup> Dec. 2024 to 02<sup>nd</sup> Jan. 2025****Past Weather:**

There has been a fall in minimum temperature upto 03°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 15 to 18°C and 9 to 11°C, respectively. The minimum temperature was above normal up to 01 to 04°C and the maximum temperature was below normal up to 02 to 05°C over most places. Shallow fog was reported at Safdarjung and Palam airports. Safdarjung airport recorded the lowest visibility 800 m at 0800 hours IST which thereafter improved becoming 1000m at 0830 hours IST. Palam airport recorded the lowest visibility of 800 m from 1000 hours to 1130 hours IST. Mainly shallow fog conditions with predominant surface wind from the west direction with wind speed reaching 10 to 16 mph prevailed during past 24 hr. Mainly cloudy conditions with wind speed less than 14 kmph northwest direction prevailed over the region in the forenoon today.

**Weather Forecast:**

**30.12.2024:** Mainly cloudy sky and cold day conditions at isolated places. The predominant surface wind will likely be in the northwest direction with a wind speed of less than 14 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the northwest direction during the night. Smog/shallow fog is likely in the evening/night.

**31.12.2024:** Mainly clear sky and cold day conditions at isolated places. The predominant surface wind is likely to be from the northwest direction with a speed of less than 06 kmph during morning hours. Smog/ shallow fog in most places and moderate fog in isolated places are likely in the morning. The wind speed will gradually increase becoming 10-12 kmph from the northwest direction during the afternoon. It will decrease thereafter becoming less than 08 kmph from the northwest direction during evening and night. Smog/shallow to moderate fog is likely in the evening/night.

**01.01.2025:** Mainly clear sky. The predominant surface wind is likely to be from the northwest direction with a wind speed less than 08 kmph during morning hours. Smog/ moderate fog in most of the places and dense fog in isolated places is likely in the morning. The wind speed will increase thereafter becoming 16-20 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

**02.01.2025:** Partly cloudy sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 06 kmph during morning hours. Smog/ shallow fog in most of the places and moderate fog in isolated places is likely in the morning. The wind speed will increase thereafter becoming 16-20 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/shallow fog is likely in the evening/night.

**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:

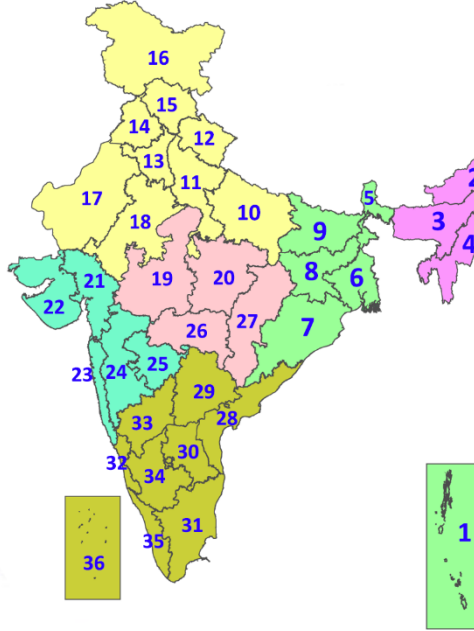
- ❖ Wear several layers of loose fitting, light weight; warm woollen clothing.
- ❖ Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm Woolen clothing rather than one layer of heavy cloth.
- ❖ 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.

### Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

## 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. रायलसेमा
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

\* 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)

### 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>

\* 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.  
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