

# Government of India Ministry of Earth Sciences India Meteorological Department



Press Release Date: 06<sup>th</sup> December, 2024 Time of Issue: 1300 hours IST

Subject: i. A fresh Western Disturbance is likely to affect Western Himalayan Region and adjoining plains of Northwest India from 08th December.

ii. A Low pressure area is likely to form over central parts of south Bay of Bengal around 07th December.

i. Realised weather during past 24 hours till 0830 hours IST of today

## Rainfall realized over the country: (details in Annexure I)

No significant rainfall realised during past 24 hours.

## Fog conditions realized over the country:

- **Dense fog (visibility 50-200 m)** reported in isolated pockets of Sub-Himalayan West Bengal & Sikkim, Bihar and Odisha.
- ❖ Visibility reported (in metre): Sub-Himalayan West Bengal & Sikkim: Cooch Behar 50; Odisha: Chandbali 50

## Weather Systems and associated weather:

- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region and adjoining plains of Northwest India from 08<sup>th</sup> December. It is very likely to cause light/moderate rainfall/snowfall over Western Himalayan Region and light isolated rainfall over Punjab, Haryana, Chandigarh & West Uttar Pradesh on 08<sup>th</sup> & 09<sup>th</sup> December, 2024.
- ❖ A cyclonic circulation lies over Equatorial Indian Ocean & adjoining southeast Bay of Bengal in lower tropospheric levels. Under its influence, a low pressure area is likely to form over central parts of south Bay of Bengal around 07<sup>th</sup> December. The system is likely to move west-northwestwards and reach over southwest Bay of Bengal off Sri-Lanka − Tamil Nadu coasts around 12<sup>th</sup> December. Under its influence, isolated heavy rainfall is likely over coastal Tamil Nadu on 11<sup>th</sup> & 12<sup>th</sup> December and Coastal Andhra Pradesh & Yanam & Rayalaseema on 12<sup>th</sup> December.

# Forecast & Warnings (upto 7 days) (Annexure II & III):

- ❖ Heavy rainfall at isolated places very likely over Tamil Nadu, Puducherry & Karaikal on 11<sup>th</sup> & 12<sup>th</sup> and Coastal Andhra Pradesh & Yanam & Rayalaseema on 12<sup>th</sup> December.
- ❖ **Dense fog conditions** very likely to prevail during late night/early morning hours in isolated pockets of Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura till 09<sup>th</sup>, Punjab, Haryana, Chandigarh & Uttar Pradesh during 07<sup>th</sup>-10<sup>th</sup>, Sub-Himalayan West Bengal & Sikkim, Bihar during 08<sup>th</sup>-10<sup>th</sup> and Himachal Pradesh on 10<sup>th</sup> & 11<sup>th</sup> December morning hours.
- ❖ Cold wave conditions very likely in isolated pockets over North Rajasthan during 10<sup>th</sup> -12<sup>th</sup> December.

## ii. Temperature conditions and Forecast:

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

Minimum temperatures are in the range of 5-10°C in the Northwest India, 10-15°C in the Indo Gangetic plains & eastern parts of India and 15-20°C over Central India, Gujarat State & Maharashtra. Minimum temperatures are markedly above normal (5°C or more) at a few places over Madhya Maharashtra, Vidarbha, Telangana and Odisha; at isolated places over Marathwada; appreciably above normal (3°C to 5°C) at many places over Coastal Andhra Pradesh & Yanam; at isolated places over South & North Interior Karnataka, Gujarat State; above normal (1°C to 3°C) at many places over Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal; at isolated places over East Rajasthan, Uttar Pradesh, Madhya Pradesh, Gangetic West Bengal, Jharkhand, Konkan, Andaman & Nicobar Islands. These are below normal (-3°C to -1°C) at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Delhi, Assam & Meghalaya and near normal over rest parts of the country. Today, the lowest minimum temperature of 3.8°C is reported at Adampur IAF (Punjab) over the plains of the country.

## **Forecast of temperature:**

- No significant change in minimum temperatures likely over Punjab, Haryana-Chandigarh during next 48 hours, then rise by 2°C during subsequent 2 days and fall thereafter.
- No significant change in minimum temperatures likely over Rajasthan during next 3 days and gradual fall by 2-3°C during subsequent 2 days.
- ❖ Gradual fall in minimum temperatures by 2-3°C likely over East India during next 2 days and then gradual rise by 2-3°C during subsequent 3 days.
- ❖ Gradual fall in minimum temperatures by 3-5°C likely over West India during next 5 days.
- No significant change in minimum temperatures likely over Central India during next 3 days and gradual fall by 2-3°C during subsequent 2 days.

## iii. Weather conditions and forecast over Delhi/NCR during 06th to 09th Dec. 2024 (Annexure IV)

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

https://mausam.imd.gov.in/responsive/all\_india\_forcast\_bulletin.php

For District wise warnings refer: <a href="https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php">https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php</a>

ANNEXURE I

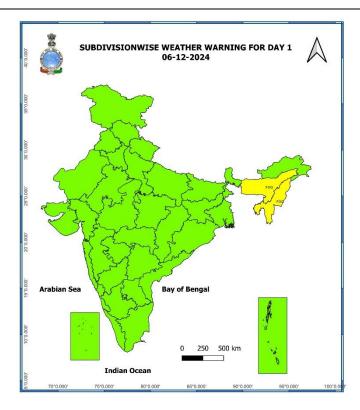
## Rainfall recorded during past 24 hours till 0830 hours IST of today 06.12.2024 (in cm):

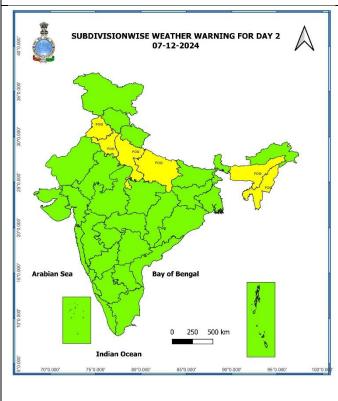
- **Konkan & Goa:** Sanguem (dist South Goa) 5, Quepem (dist South Goa) 3;
- ❖ Coastal Andhra Pradesh & Yanam: Veligandla (dist Prakasam) 4, Ongole (dist Prakasam) 4;
- ❖ **Kerala & Mahe:** Panathur (dist Kasargod) 2, Thiruvananthapuram (dist Thiruvananthapuram) 1, Kodungallur (dist Thrissur) 1, Neyyattinkara (dist Thiruvananthapuram) 1, Taliparamba (dist Cannur) 1

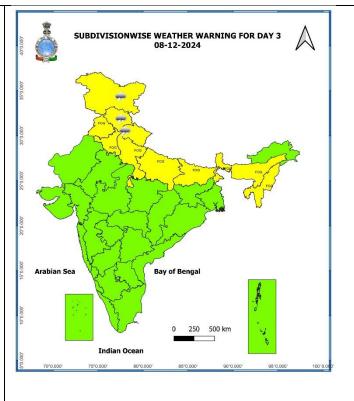
# **ANNEXURE II**

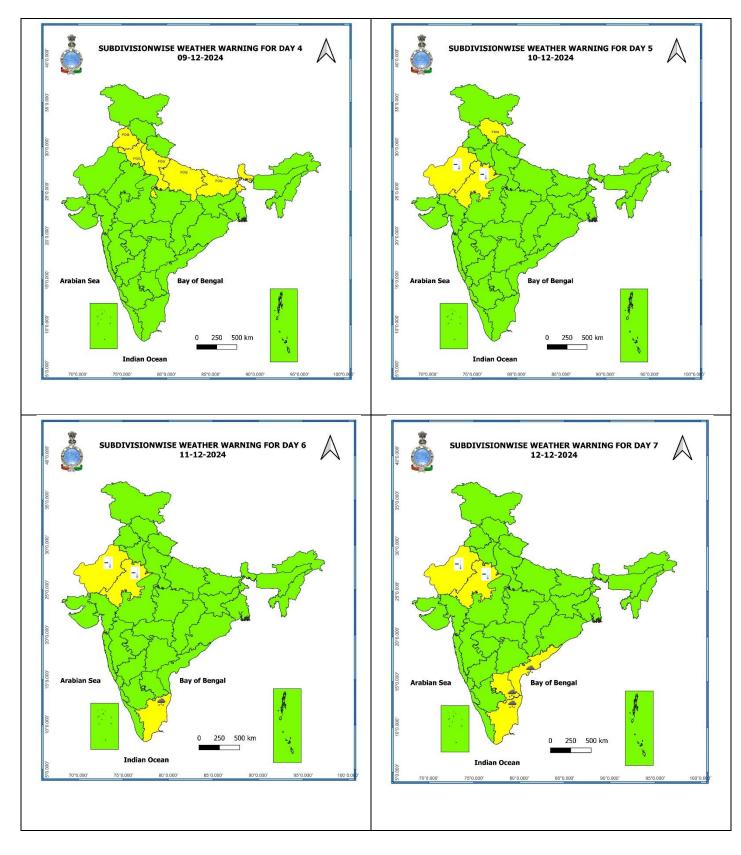
	7 Days Rainfall Forecast										
S. No.	Subdivision	06- Dec Day 1	07- Dec Day 2	08- Dec Day 3	09- Dec Day 4	10- Dec Day 5	11- Dec Day 6	12- Dec Day 7			
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	FWS	SCT	SCT			
2	ARUNACHAL PRADESH	ISOL	SCT	SCT	SCT	ISOL	DRY	DRY			
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	ISOL	DRY	DRY	DRY			
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY									
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	ISOL	SCT	ISOL	DRY	DRY			
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	ISOL	DRY	DRY	DRY			
7	ODISHA	DRY	DRY	DRY	ISOL	ISOL	DRY	DRY			
8	JHARKHAND	DRY	DRY	DRY	ISOL	ISOL	DRY	DRY			
9	BIHAR	DRY	DRY	DRY	ISOL	ISOL	DRY	DRY			
10	EAST UTTAR PRADESH	DRY									
11	WEST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY			
12	UTTARAKHAND	DRY	DRY	ISOL	SCT	DRY	DRY	DRY			
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY			
14	PUNJAB	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY			
15	HIMACHAL PRADESH	DRY	DRY	SCT	SCT	ISOL	DRY	DRY			
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	SCT	ISOL	DRY	DRY	DRY			
17	WEST RAJASTHAN	DRY									
18	EAST RAJASTHAN	DRY									
19	WEST MADHYA PRADESH	DRY									
20	EAST MADHYA PRADESH	DRY	ISOL	ISOL	DRY	DRY	DRY	DRY			
21	GUJARAT REGION	DRY									
22	SAURASHTRA & KUTCH	DRY									
23	KONKAN & GOA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY			
24	MADHYA MAHARASHTRA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY			
25	MARATHAWADA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY			
26	VIDARBHA	DRY	ISOL	ISOL	ISOL	DRY	DRY	DRY			
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY			
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	SCT			
29	TELANGANA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY			
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	ISOL	SCT	FWS			
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	SCT			
32	COASTAL KARNATAKA	SCT	SCT	ISOL	ISOL	DRY	DRY	DRY			
33	NORTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY			
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	DRY	DRY	DRY	ISOL			
35	KERALA & MAHE	SCT									
36	LAKSHADWEEP	SCT									

• 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.

## Weather Realised (past 24 hours) & forecast (during 06th Dec. to 09th Dec. 2024) over Delhi/NCR

### **Past Weather:**

There has been a fall in maximum temperature upto 03°C over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 23 to 26°C and 08 to 11°C respectively. The maximum and minimum temperature were near normal over most places. Mainly smog/mist condition with predominant surface wind from northwest direction with wind speed reaching 12 to 20 kmph prevailed on 05.12.2024. Mainly clear sky condition with wind speed less than 12 kmph northwest direction prevailed over the region in the forenoon today.

#### Weather Forecast:

**06.12.2024:** Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed less than 12 kmph till evening. It would decrease thereafter becoming less than 06 kmph from northwest direction during night. Smog/mist is likely in the evening/night.

**07.12.2024:** Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 04 kmph during morning hours. Smog/shallow fog is likely in the morning. The wind speed will increase thereafter becoming less than 06 kmph from variable direction during afternoon. It will decrease thereafter becoming less than 04 kmph from southeast direction during evening and night. Smog/mist is likely in the evening/night.

**08.12.2024:** Mainly clear sky. The predominant surface wind is likely to be from southeast direction with speed less than 08 kmph during morning hours. Smog/shallow to moderate fog is likely in the morning. The wind speed will gradually increase becoming 12-14 kmph from southeast direction during afternoon. It will decrease thereafter becoming less than 08 kmph from southeast direction during evening and night. Smog/mist is likely in the evening/night.

**09.12.2024:** Mainly clear sky. The predominant surface wind is likely to be from variable direction with wind speed less than 04 kmph during morning hours. Smog/ moderate fog in the morning. The wind speed will increase thereafter becoming 08-10 kmph from southeast direction during afternoon. It will gradually decrease becoming less than 06 kmph from southeast direction during evening and night. Smog/ shallow fog is likely in the evening/night.

## Impact expected due to 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 wave/severe cold wave conditions over north Rajasthan

- 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 woolen 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.



35. केरल और माहे

36. लक्षद्वीप

#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

#### National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

35. Kerala & Mahe

36. Lakshadweep

# **LEGENDS**



# **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)





Sea State

Cyclone



#### **DEFINITION/CRITERIA** Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm Rain/ Snow \* Extremely Heavy: > 204.4 mm/cm When maximum temperature of a station reaches ≥40° C for plains and ≥30° C for hilly regions (a) Based on Departure from normal Heat Wave: Maximum Temperature Departure from normal 4.5° C to 6.4° C. Severe Heat Wave: Maximum Temperature Departure from normal ≥6.5° C (b). Based on Actual maximum temperature **Heat Wave** Heat Wave: When actual maximum temperature ≥45°C Severe Heat Wave: When actual maximum temperature ≥47°C (c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°C When maximum temperature remains 40°C Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C Warm Night Severe Warm Night: When minimum temperature departure >6.4 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions. (a). Based on departure Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C. Severe Cold Wave: Minimum Temperature Departure from normal $\leq$ -6.5 °C **Cold Wave** (b) Based on actual Minimum Temperature (for Plains only) Cold Wave : When Minimum Temperature is ≤ 4.0 °C Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C (c) For Coastal Stations When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure **Cold Day** Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C. Severe Cold Day: Maximum Temperature Departure from normal $\leq$ -6.5 °C Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres Fog when the visibility between 50- 200 metres Dense Fog: v Very Dense Fog: when the visibility < 50 metres Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm Dust/Sand An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Frost Air temperature ≤4°C ( over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Squall Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph

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

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Super Cyclone Strom: Wind speed >220 kmph (>119 knots)