



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

Press Release

Date: 24th December, 2022

Time of Issue: 1300 hours IST

**Subject: (i) Dense to Very Dense Fog conditions likely to continue over Punjab and Haryana and dense fog over the remaining parts of north Indian plains tomorrow morning, reducing in intensity thereafter;
(ii) Cold Day/Cold Wave conditions over Punjab, Haryana and north Rajasthan during next 2-3 days;
(iii) Depression over Southwest Bay of Bengal.**

Weather observed during past 24 hours ending at 0830 hrs IST of today:

- ❖ **Minimum temperatures** are in the range of 4-6°C over many parts of Punjab, Haryana and north Rajasthan.
- ❖ Yesterday, **Cold day to severe cold day conditions** prevailed in many parts over Punjab and Haryana and **Cold day conditions** in isolated pockets over north Rajasthan.
- ❖ Today, **Cold wave conditions** prevailed in isolated pockets over Himachal Pradesh and north Rajasthan.
- ❖ **Dense to very dense fog** in many parts of Punjab; in isolated pockets over north Rajasthan; **Dense fog** in some pockets over Haryana; in isolated pockets over Himachal Pradesh, Bihar and Sub-Himalayan West Bengal & Sikkim; **Moderate fog** in isolated pockets over Chandigarh, Delhi, East Uttar Pradesh and Assam.

Weather systems and forecast & warning:

(1) Minimum Temperature Forecast, Cold Wave/Cold Day & Fog Warnings (Annexure I & II):

Fog Warning

- ❖ Due to persistence of high moisture and light northerly winds at lower tropospheric levels over Northwest Indian plains, **Dense to very dense fog** in many places very likely to continue over Punjab and Haryana, Chandigarh in early morning hours of 25th December. Thereafter, **Dense fog** in isolated pockets very likely to continue over these sub-divisions for subsequent 4 days.
- ❖ **Dense Fog** in isolated pockets also very likely over Himachal Pradesh, Delhi, Bihar, West Bengal & Sikkim, Odisha, Assam and Tripura in early morning hours of 25th December; over Uttar Pradesh and north Rajasthan in night/morning hours of 25th -26th December and decrease in intensity thereafter.

Minimum Temperature Forecast & Cold Wave/Cold Day Warning

- ❖ Rise in minimum temperatures by 2-4°C likely over East India during next 3 days and fall by 2-3°C during subsequent 2 days. Fall in minimum temperatures by about 2°C likely over most parts of Northwest India during next 3 days and no significant change thereafter. No significant change in minimum temperatures likely over Madhya Pradesh during next 2 days and gradual fall by 2-4°C thereafter. Fall in minimum temperatures by 2-3°C likely over Maharashtra during next 2 days and no significant change thereafter.

- ❖ Due to dry north/northwesterly winds from Himalayas over plains of northwest India, **Cold Wave to Severe Cold Wave Conditions** very likely in isolated pockets over north Rajasthan during next 3 days and **Cold Wave Conditions** during subsequent 2 days. **Cold Wave Conditions** very likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi during next 3 days and Himachal Pradesh during next 24 hours.
- ❖ **Cold Day to severe cold day Conditions** very likely in many places over Punjab and Haryana, Chandigarh & Delhi during next 24 hours and **cold day Conditions** during subsequent 24 hours over the region. **Cold Day Conditions** also very likely in isolated pockets over north Rajasthan during next 48 hours.

(2) Depression over southwest Bay of Bengal.

The **Depression** over Southwest Bay of Bengal recurved gradually west-southwestwards with a speed of 13 kmph during past 06 hours and lay centered at 0830 hours IST of today, the 24th December over the same region near latitude 10.7°N and longitude 84.2°E about 400 km east-northeast of Trincomalee (Sri Lanka), 470 km east of Nagappattinam (Tamil Nadu) and 500 km east-southeast of Chennai (Tamil Nadu).

It is likely to move further west-southwestwards and reach near Sri Lanka coast by 25th morning. Thereafter, it would continue to move west-southwestwards across Sri Lanka and reach Comorin Area and neighbourhood by 26th morning.

Warnings:

Rainfall warning (Graphics enclosed in Annexure II):

- Light to moderate rainfall at many places with heavy rainfall at isolated places is likely over south coastal Tamil Nadu on 25th & 26th December 2022.
- Light to moderate rainfall at a few places with heavy rainfall at isolated places is likely over south Kerala on 26th December 2022.
- Light to moderate rainfall at many places with heavy rainfall at isolated places is likely over Lakshadweep Islands on 27th December 2022.

Wind warning (Graphics enclosed in Annexure III):

- **Southwest Bay of Bengal along & off Tamil Nadu and Sri Lanka coasts:** Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail till 25th December morning becoming 40-50 kmph gusting to 60 kmph till 26th morning and decrease thereafter.
- **Adjoining areas of southeast & westcentral Bay of Bengal:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 24th December and decrease thereafter.
- **Gulf of Mannar and Comorin Area along & off south Tamil Nadu & west Sri Lanka coasts:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 24th December becoming squally wind speed reaching 45-55 kmph gusting to 65 kmph during 25th and 26th December.
- **Lakshadweep Islands & adjoining Southeast Arabian Sea:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 27th December.
- **Southeast Arabian Sea:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 28th December.

Sea condition:

- **Southwest Bay of Bengal along & off Tamil Nadu and Sri Lanka coasts:** Sea condition is likely to be rough to very rough till 26th December morning and improve thereafter.
- **Adjoining areas of southeast & westcentral Bay of Bengal:** Sea condition is likely to be rough on 24th December and improve thereafter.
- **Gulf of Mannar and Comorin Area along & off south Tamil Nadu & west Sri Lanka coasts:** Sea condition is likely to be rough to very rough during 25th and 26th December.
- **Lakshadweep Islands & adjoining Southeast Arabian Sea:** Sea condition is likely to be rough to very rough on 27th December.
- **Southeast Arabian Sea:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 28th December.

Fishermen Warning (Graphics enclosed in Annexure III):

Fishermen are advised not to venture into

- Southwest Bay of Bengal and along & off Sri Lanka coast on 24th & 25th December.
- Adjoining areas of southeast & westcentral Bay of Bengal on 24th December.
- Gulf of Mannar and Comorin Area along & off south Tamil Nadu and west Sri Lanka coasts during 24th-26th December.
- Sea areas of Lakshadweep Islands & adjoining Southeast Arabian Sea on 27th December.
- Southeast Arabian Sea on 28th December.

For more details kindly refer:

https://mausam.imd.gov.in/imd_latest/contents/all_india_forecast_bulletin.php

Impact expected and action suggested due to Dense/Very Dense fog in in many places over Punjab and Haryana, Chandigarh in early morning hours of 25th – 28th December; in isolated pockets over Himachal Pradesh, Delhi, Bihar, West Bengal & Sikkim, Odisha, Assam and Tripura in early morning hours of 25th December; over Uttar Pradesh and north Rajasthan in night/morning hours of 25th -26th December.

➤ **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.
- 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.
- Causes 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:**

- Careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines and Railway 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.

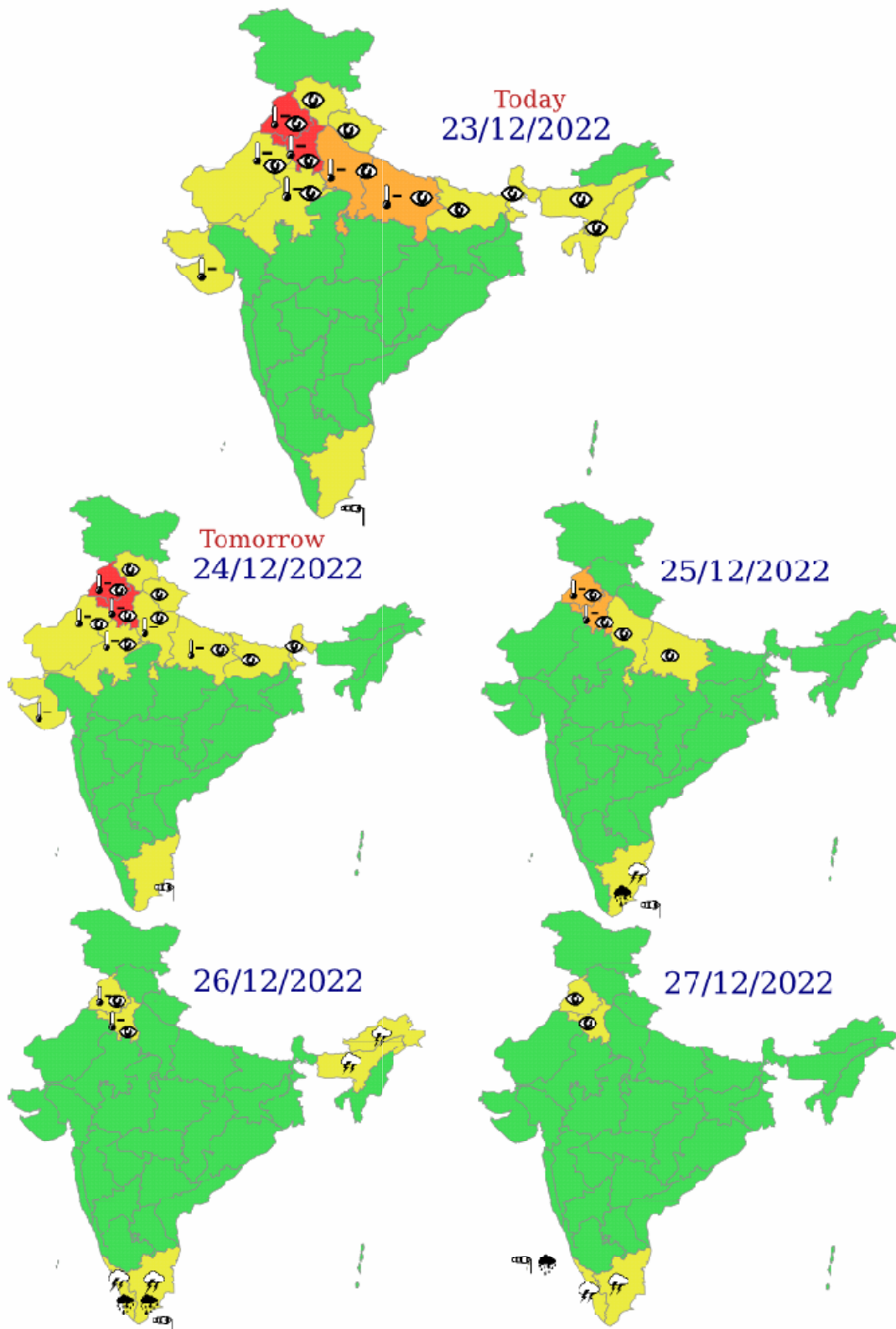
Impact expected and action suggested due to Cold Day/Severe Cold day conditions in isolated parts of Punjab, Haryana and north Rajasthan during next 2-3 days.

Impact expected:

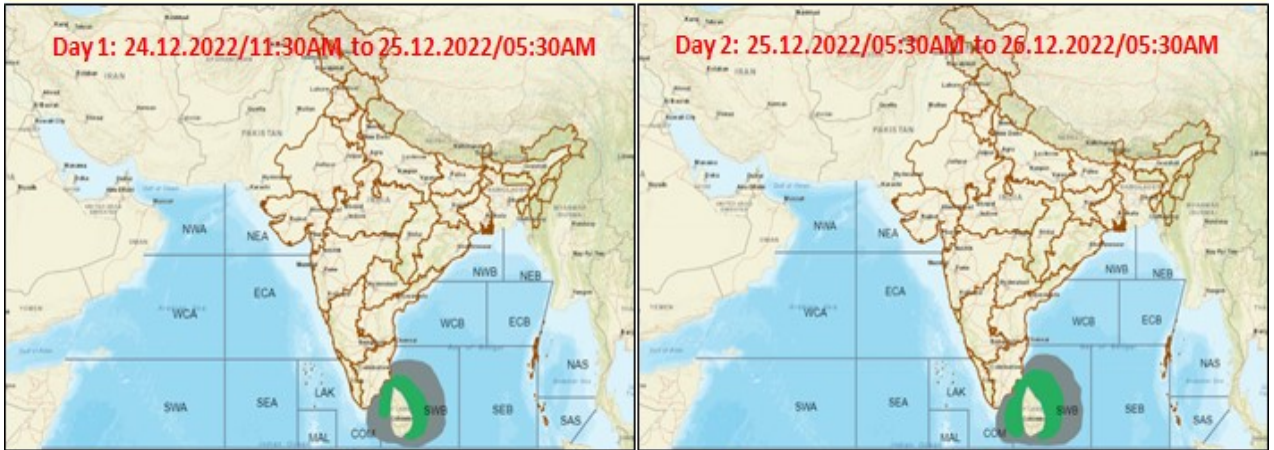
- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure 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. (For details kindly refer NDMA guidelines: https://ndma.gov.in/Resources/awareness/Cold_Wave)



Fishermen warning graphics



Squally WX with wind speed 40-50 kmph gusting to 60 kmph

Squally wind speed 45-55 kmph gusting to 65 kmph

Fishermen are advised not to venture into the marked areas.

Legends:

Heavy Rain: 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4 mm.

Region wise classification of meteorological Sub-Divisions:

- 1) **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.
- 2) **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- 3) **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- 4) **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- 5) **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
- 6) **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and 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)

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

