



**Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department**

**Press Release
Date 01st January, 2021
Time of Issue: 1500 hrs IST**

Subject: Wet spell over Northwest & adjoining Central India during 03rd-06th January, 2021 and abatement of Cold Wave & Cold Day conditions from Northwest India from 03rd January, 2021.

Meteorological analysis:

- A Western Disturbance as a cyclonic circulation lies over Afghanistan & neighbourhood at middle & upper tropospheric levels. It is likely to move slightly eastwards to central Pakistan & neighborhood during next 48 hours and remain practically stationary there during subsequent 3-4 days.
- An induced cyclonic circulation lies over southwest Rajasthan & neighbourhood in lower tropospheric levels and is likely to persist over the same area during next 3-4 days.
- The confluence of southwesterlies in association with the above Western Disturbance and lower level southeasterlies is very likely over plains of northwest & adjoining areas of central India during 2nd- 5th January, 2021.

Forecast & Warnings:

- Under the influence of above systems, light/moderate fairly widespread rainfall/snowfall over Western Himalayan region during 04th - 06th January, 2021 with its peak intensity on 4th & 5th is very likely with possibility of **heavy rain/snow** over Jammu Division & Kashmir Valley. Hailstorm at isolated places is also likely over Western Himalayan Region on 4th & 5th January, 2021.
- Scattered to fairly widespread rainfall accompanied with thunderstorm/hailstorm at isolated places very likely over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, West Uttar Pradesh and northwest Madhya Pradesh during 03rd - 05th with maximum intensity on 03rd & 04th January, 2021. Isolated heavy rainfall also likely over Punjab on 04th January, 2021.

Temperature Forecast, Cold Wave Warning and Fog Forecast:

- Minimum temperatures are between 1.0°C to 6.0°C over plains of northwest & adjoining central India except at isolated places of south Haryana & north Rajasthan where it is between 0°C to -1°C. These are very likely to increase gradually by 3-5°C over these regions during next 3 days and no significant change thereafter for subsequent 3 days.
- Cold wave to severe cold wave conditions are prevailing over many parts of plains of Northweest India and adjoining Central India. These are likely to continue over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan during next 24 hours and **abate thereafter**.
- Dense to very Dense fog in isolated pockets are likely over Punjab, Haryana, Chandigarh & Delhi and north Uttar Pradesh in the morning hours of 02nd & 03rd and likely to abate thereafter.

Detailed forecast & warnings are as follow:

Sub-Divisions	02 Jan. 2021	03 Jan. 2021	04 Jan. 2021	05 Jan. 2021
Jammu & Kashmir	Rain/snow at isolated places	Rain/snow at a few places with isolated thunderstorm & lightning	Rainfall/snowfall at many places with isolated heavy rain/snow and isolated thunderstorm & lightning/hail	Rain/snow at most places with isolated heavy rain/snow and isolated thunderstorm & lightning/hail
Himachal Pradesh	Rain/snow at isolated places	Rain/snow at isolated places	Rain/snow at many places with isolated thunderstorm & lightning/hail	Rain/snow at most places with isolated thunderstorm & lightning/hail
Uttarakhand	Rain/snow at isolated places	Rain/snow at isolated places with isolated thunderstorm & lightning/hail	Rain/snow at many places with isolated thunderstorm & lightning/hail	Rain/snow at most places
Punjab	Rain/thundershowers at isolated places with isolated thunderstorm & lightning	Rain/thundershowers at many places with thunderstorm at a few places & lightning/hail at isolated places	Rain/thundershowers at most places with isolated heavy falls and thunderstorm at a few places & lightning/hail at isolated places	Rain/thundershower at most places with isolated thunderstorm & lightning
Haryana, Chandigarh & Delhi	Rain/thundershowers at isolated places with isolated thunderstorm & lightning	Rain/thundershowers at a few places with thunderstorm at a few places & lightning/hail at	Rain/thundershowers at most places with thunderstorm at a few places & lightning/hail at	Rain/thundershowers at most places with isolated thunderstorm &

		isolated places	isolated places	lightning
North Rajasthan	Rain/thundershowers at isolated places with isolated thunderstorm & lightning	Rain/thundershowers at a few places with isolated thunderstorm & lightning/hail	Rain/thundershowers at a few places with isolated thunderstorm & lightning/hail	Rain/thundershowers at isolated places
West Uttar Pradesh	Rain/thundershowers at isolated places	Rain/thundershowers at a few places with isolated thunderstorm & lightning/hail	Rain/thundershowers at a few places with isolated thunderstorm & lightning/hail	Rain/thundershowers at a few places with isolated thunderstorm & lightning
Northwest Madhya Pradesh	Rain/thundershowers at isolated places with isolated thunderstorm & lightning	Rain/thundershowers at isolated places with isolated thunderstorm & lightning	Rain/thundershowers at isolated places	NIL

Impact expected and action suggested due to Cold Wave/Severe Cold Wave conditions over Uttar Pradesh during next 2 days; over Punjab, Haryana, Chandigarh & Delhi and north Rajasthan during next 24 hours and Cold Day/Severe Cold Day conditions over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh during next 24 hours.

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)

Impact expected and action suggested due to Dense/Very Dense fog over north Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi, Assam & Meghalaya and Nagaland, Mizoram, Manipur & Tripura during next 48 hours.

Impact expected:

➤ **Transport and Aviation:**

- May affect some airports, highways and railway routes in the areas of met- sub-division.
- Ferry services also to be affected.
- 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:

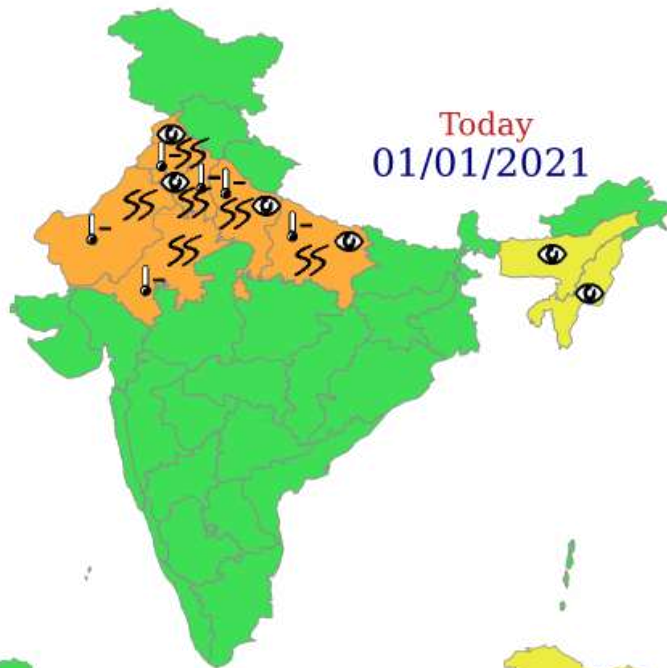
➤ **Transport and Aviation:**

- Careful while driving or outing through any transport.
- Use fog lights during driving.
- Be touch with airlines and Railway and State transport for scheduled of your journey.

➤ **Power Sector:**

- Keep ready Maintenance Team

- **Human Health:** Avoid outing until unless emergency and cover the face.



A. Conditions for Cold Wave:

When minimum temperature of a station is 10°C or less for plains and 0°C or less for Hilly regions and fulfils any of the following criteria:

I) Based on Departure of Minimum Temperatures from Normal

Cold Wave: When the Departure is -4.5°C to -6.4°C Severe

Cold Wave: When the Departure is > -6.4°C

II) Based on Actual Minimum Temperature (For plain stations only) Cold

Wave: When minimum temperature is $\leq 4^{\circ}\text{C}$

Severe Cold Wave: When minimum temperature is $\leq 2^{\circ}\text{C}$

III) For coastal stations:

When the Departure of Minimum Temperature is -4.5°C or less and Minimum Temperature is 15°C or less.

B. Conditions for Cold Day:

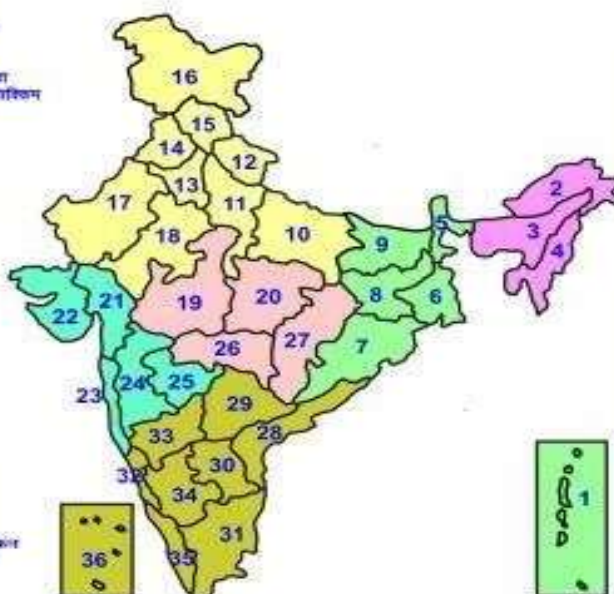
When minimum temperature is 10°C or less for plains and 0°C or less for Hilly regions and fulfils following criteria:

Cold day: Maximum Temperature Departure is -4.5°C to -6.4°C Severe Cold

day: Maximum Temperature Departure is < -6.4°C

LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल, असम, सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तरांचल
- 13 हरियाणा, चंडीदाह और दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू और कश्मीर
- 17 राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात
- 22 सौराष्ट्र
- 23 कर्नाटक
- 24 मध्य महाराष्ट्र
- 25 महाराष्ट्र
- 26 महाराष्ट्र
- 27 महाराष्ट्र
- 28 पश्चिम मध्य प्रदेश एवं मध्य प्रदेश
- 29 मध्य प्रदेश
- 30 मध्य प्रदेश
- 31 मध्य प्रदेश
- 32 मध्य प्रदेश
- 33 मध्य प्रदेश
- 34 मध्य प्रदेश
- 35 मध्य प्रदेश
- 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. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & 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. Maharashtra
26. Vidharbha
27. Chhatisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnada, 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)

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

 Heavy Rain	 Heavy Snow	 Thunderstorm	 Dust Storm
 Strong Winds	 Visibility	 Cyclone	 Squall/ Hail
 Frost	 Cold Wave	 Heat Wave	 Sea State

Kindly download **MAUSAM APP** for location specific forecast & warning, **MEGHDOOT APP** for Agromet advisory and **DAMINI APP** for Lightning Warning & visit state MC/RMC websites for district wise warning.