



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 09th January, 2024

Time of Issue: 1245 hours IST

Subject: 1) Cold Day to Severe Cold Day conditions likely to continue over Northwest India during next 24 hours and abate thereafter.

2) Isolated light rainfall likely over Northwest & Central India on 09th January and dry weather thereafter.

3) Light to moderate rainfall spell likely over south Peninsular India with isolated heavy rainfall over Tamil Nadu and Kerala during next 24 hours and substantial decrease thereafter.

Realized weather during past 24 hours till 0830 hours IST of today:

- **Minimum temperatures:** Minimum Temperatures are in the range of 7-10°C over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and Rajasthan; 11-13°C over parts of Bihar, Jharkhand, north Madhya Pradesh and West Bengal & Sikkim. It is above normal by 1-3°C over many parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Chhattisgarh and 4-7°C above normal over many parts of Madhya Pradesh and Gujarat state. **Today, the lowest minimum temperature of 6.0°C reported at Narnaul (Haryana).**
- **Yesterday, Maximum temperatures** were in the range of 9-14°C over Punjab, north Rajasthan and Haryana-Chandigarh, West Uttar Pradesh and in the range of 15-18°C over Delhi. It were below normal by 3-6°C over some parts of Punjab, Haryana-Chandigarh-Delhi, Rajasthan and West Uttar Pradesh.
- Yesterday, **Cold day to severe cold day conditions** prevailed over some parts of Punjab & Haryana and in isolated pockets over Rajasthan and West Uttar Pradesh.
- **Fog conditions observed** (at 0530 & 0830 hours IST of today): **Very Dense fog (visibility < 50 metre) during morning hours** in some parts of Punjab, East Uttar Pradesh; in isolated pockets of Haryana-Chandigarh, West Uttar Pradesh, Rajasthan; **Dense fog (visibility 50-200 metre)** in most parts of Uttarakhand and in isolated pockets of Jammu, Bihar, Jharkhand, Bengal & Sikkim, Odisha, Assam & Meghalaya and Tripura.
- **Visibility recorded** (at 0530 hours IST of today) (in meters): **Uttar Pradesh:** Bareilly, Varanasi (Babatpur) & Gorakhpur-25 each; Jhansi, Lucknow & Varanasi-50 each, Sultanpur-500; **Rajasthan:** Jaisalmer-50, Churu & Kota -200 each, Jaipur-500; **Bihar:** Purnia-50, Gaya-200; **Haryana-Chandigarh:** Ambala and Chandigarh-200 each; **Madhya Pradesh:** Gwalior-200; **Odisha:** Chandbali-200.
- **Visibility recorded** (at 0830 hours IST of today) (in meters): **Jammu Division:** Jammu-25; **Punjab:** Ludhiana and Ambala-50 each, Patiala-200; **Delhi:** Ayanagar-200; **Haryana:** Karnal-50; Rajasthan: Jaisalmer-25 (WR), Ajmer-50(ER), **Uttar Pradesh:** Bareilly & Varanasi-25 each; Bahraich, Gorakhpur- 50 each; Agra, Jhansi, Sultanpur & Fursatganj-200 each; **Madhya Pradesh:** Guna and Ujjain-50 each, Rewa-25, Satna-50; **Bihar:** Patna & Bhagalpur-50 each, Purnea-200; **Jharkhand:** Jamshedpur-50, Daltonganj-200; Sub-Himalayan West **Bengal & Sikkim:** Siliguri-50, Cooch Behar- 50, Jalpaiguri & Malda-200 each; **Tripura:** Agartala-200, **Gangetic West Bengal:** Digha, Diamond Harbor and Midnapore-200 each; **Odisha:** Roulkela-50.
- **Heavy to very heavy rainfall** recorded at isolated places over north coastal Tamil Nadu.
- **Tamil Nadu:** Marakkanam (Villupuram)-19, Tindivanam-9, Gingee-7, Cheyyur (Chengalpattu)-13, Madurantakam -12.

Weather Systems and Forecast & Warnings during next 5 days:

- A cyclonic circulation lies over East Equatorial Indian Ocean centered at Lat 2.8°N/Long 82.2°E in lower tropospheric levels.
- A cyclonic circulation lies over Southeast & adjoining Eastcentral Arabian and a trough runs from this cyclonic circulation to south Gujarat in lower tropospheric levels. Under the influence of above systems:
 - ✓ Light to moderate rainfall at some places very likely over Tamil Nadu, Kerala, Coastal Karnataka and Lakshadweep during next 3 days. Isolated **heavy rainfall** very likely over Kerala and Lakshadweep on 09th January.
 - ✓ **Isolated very heavy rainfall also very likely over south Tamil Nadu on 09th January.**
- A Western Disturbance seen as a cyclonic circulation over Haryana & neighbourhood with a trough aloft in middle tropospheric westerlies roughly along Long. 72°E to the north of Lat. 25°. Under its influence:
 - ✓ Light isolated rainfall/snowfall likely over Himachal Pradesh, Uttarakhand on 09th January and isolated rainfall over Punjab, Haryana, Uttar Pradesh, East Rajasthan on 09th January.
 - ✓ Light to moderate rainfall accompanied with thunderstorms and lightning very likely at isolated places over Madhya Pradesh and Maharashtra on 09th & 10th and over Gujarat on 09th January.
 - ✓ Isolated **hailstorm** also likely over Northwest Madhya Pradesh on 09th January.

Dense fog and Cold day warning: (graphics in Annexure I)

- **Dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over Punjab, Haryana, Chandigarh, Uttar Pradesh during 10th-14th; over Jammu division on 10th; over Himachal Pradesh, Uttarakhand, north Rajasthan, north Madhya Pradesh, Odisha on 10th & 11th and over Bihar, West Bengal & Sikkim, Assam & Meghalaya, Mizoram & Tripura during 10th-12th January.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Haryana & Punjab and in isolated pockets of West Uttar Pradesh & Rajasthan on 09th is likely to reduce into **Cold Day** conditions in isolated pockets on 10th and abate thereafter.

Temperatures Forecast and Cold wave warning:

- No significant change in minimum temperatures likely over East India during next 24 hours and fall by 2-4°C during subsequent 3 days.
- No significant change in minimum temperatures likely over Central India during next 48 hours and fall by 2-4°C during subsequent 3 days.
- **No Cold wave conditions** are likely over the country during next 5 days.
- **Ground frost conditions** very likely over Uttarakhand during 10th-12th January, 2024.

Fishermen warning:

09th-10th Jan: Squally Weather with Wind Speed 40-45 Kmph gusting to 55 Kmph likely to prevail over along & off Tamil Nadu coast, adjoining Southwest Bay of Bengal, Gulf of Mannar & adjoining Comorin Area and along & off Sri Lanka coast; off Kerala coast and adjoining Lakshadweep area. Fishermen are advised not to venture into these areas.

For more details kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

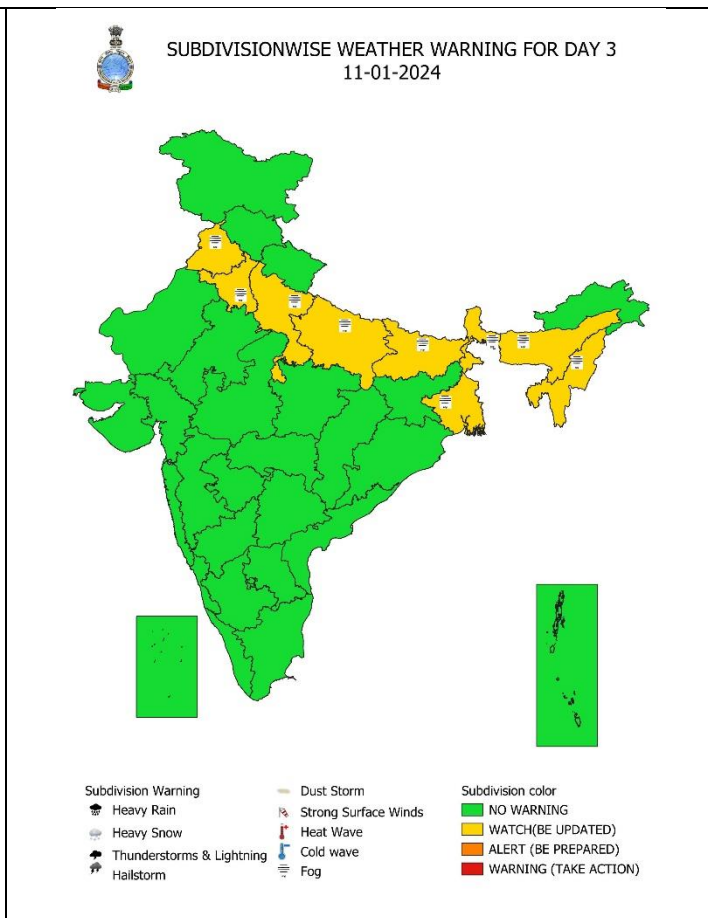
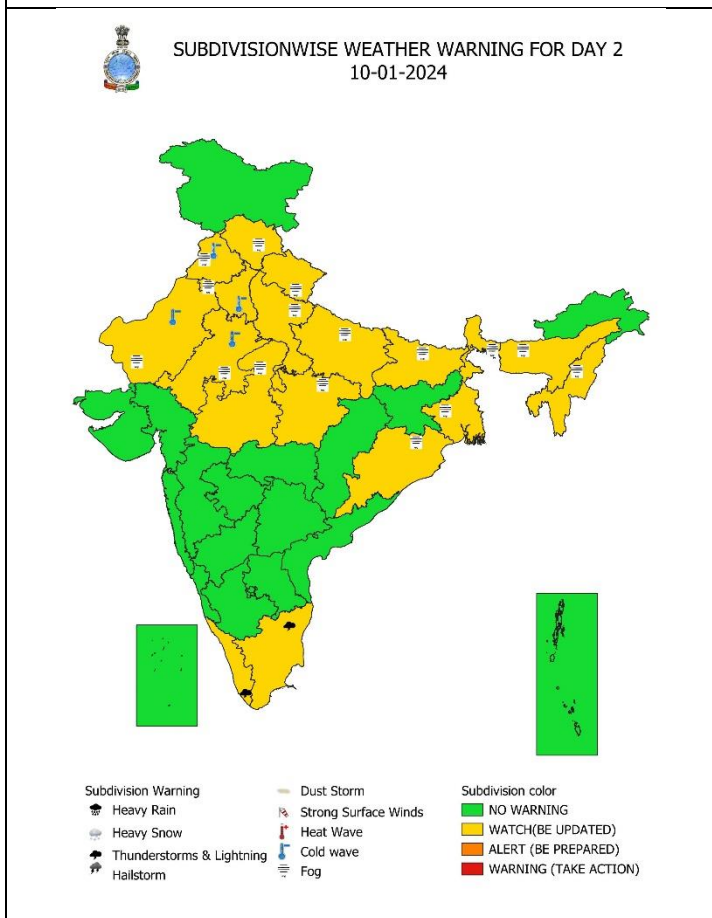
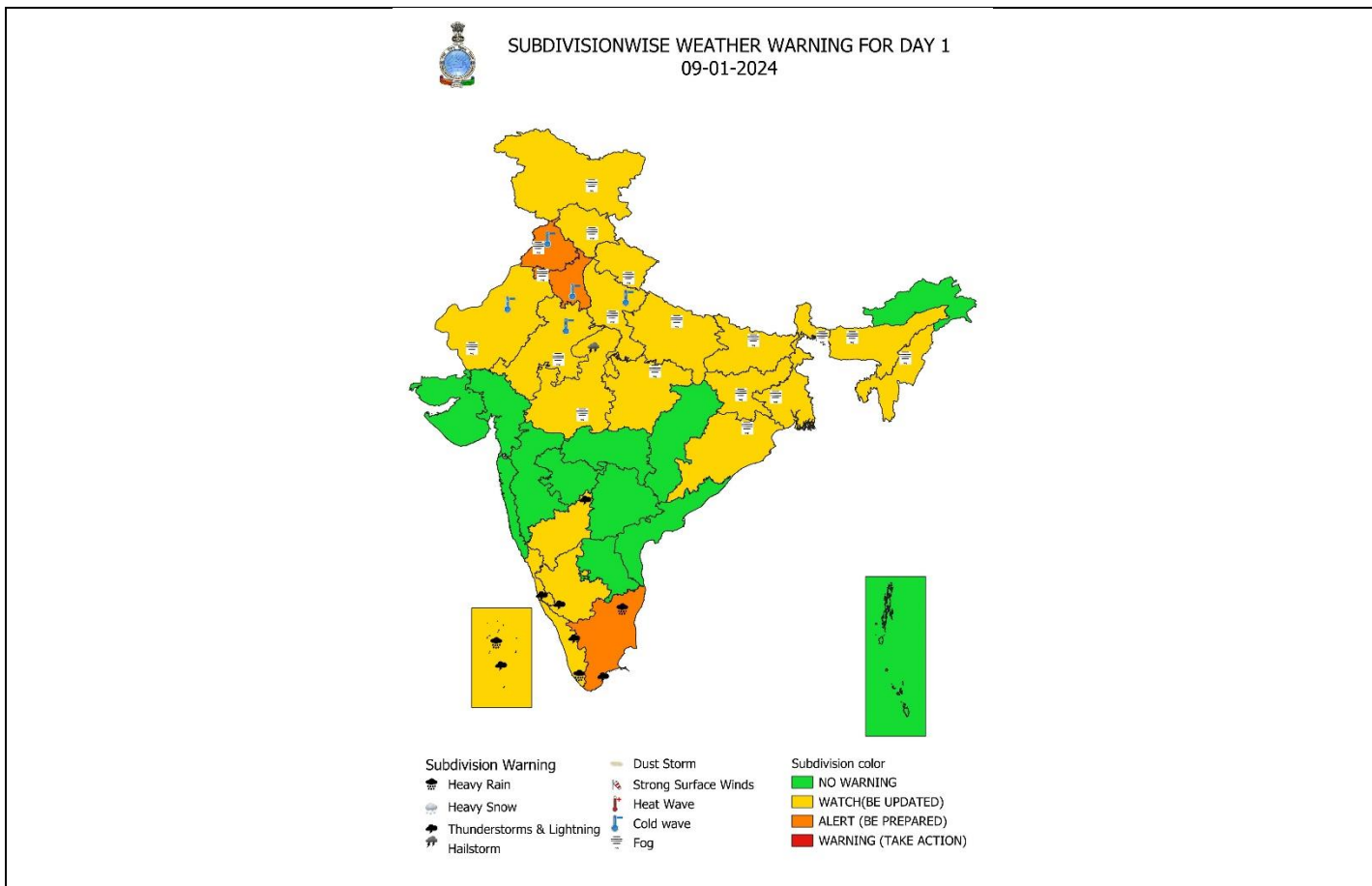
EXPECTED IMPACT & ACTION SUGGESTED due to very heavy rainfall over south Tamil Nadu on 09th January, 2024.

Impact Expected

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

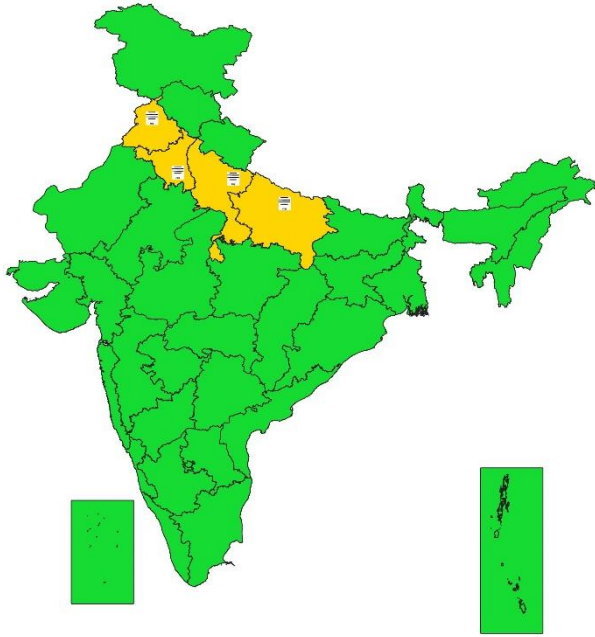
Action Suggested

- 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.





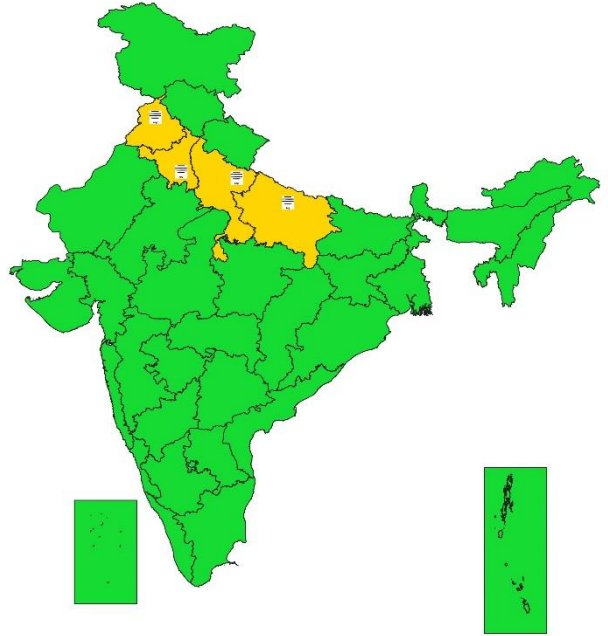
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
12-01-2024



- | | | |
|----------------------------|----------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH (BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED) |
| Hailstorm | Fog | WARNING (TAKE ACTION) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY-5
13-01-2024



- | | | |
|----------------------------|----------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH (BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED) |
| Hailstorm | Fog | WARNING (TAKE ACTION) |

Legends:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation
- ❖ **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 Marathwada.
 - **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)

Subdivision Warning	Dust Storm	Subdivision color
Heavy Rain	Strong Surface Winds	NO WARNING
Heavy Snow	Heat Wave	WATCH (BE UPDATED)
Thunderstorms & Lightning	Cold wave	ALERT (BE PREPARED)
Hailstorm	Fog	WARNING (TAKE ACTION)

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

Flash Flood Risk	
	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)

Definition of Cold wave, Cold Day and Fog Conditions:

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°C to -6.4°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°C to -6.4°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