



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 11th February, 2024

Time of Issue: 1300 hours IST

Subject: Light to moderate rainfall with thunderstorm activity likely over Central India during 11th-13th February, 2024.

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

- ❖ **Minimum temperatures:** Minimum temperatures are in the range of 7-11°C over many parts of northern plains. These are below normal by 2-4°C over some parts of the region. **Today, the lowest minimum temperature of 4.6°C reported at Amritsar (Punjab).**
- ❖ **Cold wave conditions** observed in isolated pockets over Himachal Pradesh and Punjab.
- ❖ **Dense to very dense fog** prevailed in morning hours at isolated pockets over Punjab (Faridkot < 50m and Bhatinda:50-200m) and **dense fog** over Delhi (50m).
- ❖ **Ground frost conditions** recorded at isolated places over Uttarakhand (Mukteshwar).
- ❖ **Hailstorms** recorded at isolated places over Vidarbha.

Weather Systems and Forecast & Warnings during next 5 days: (graphics in Annexure I)

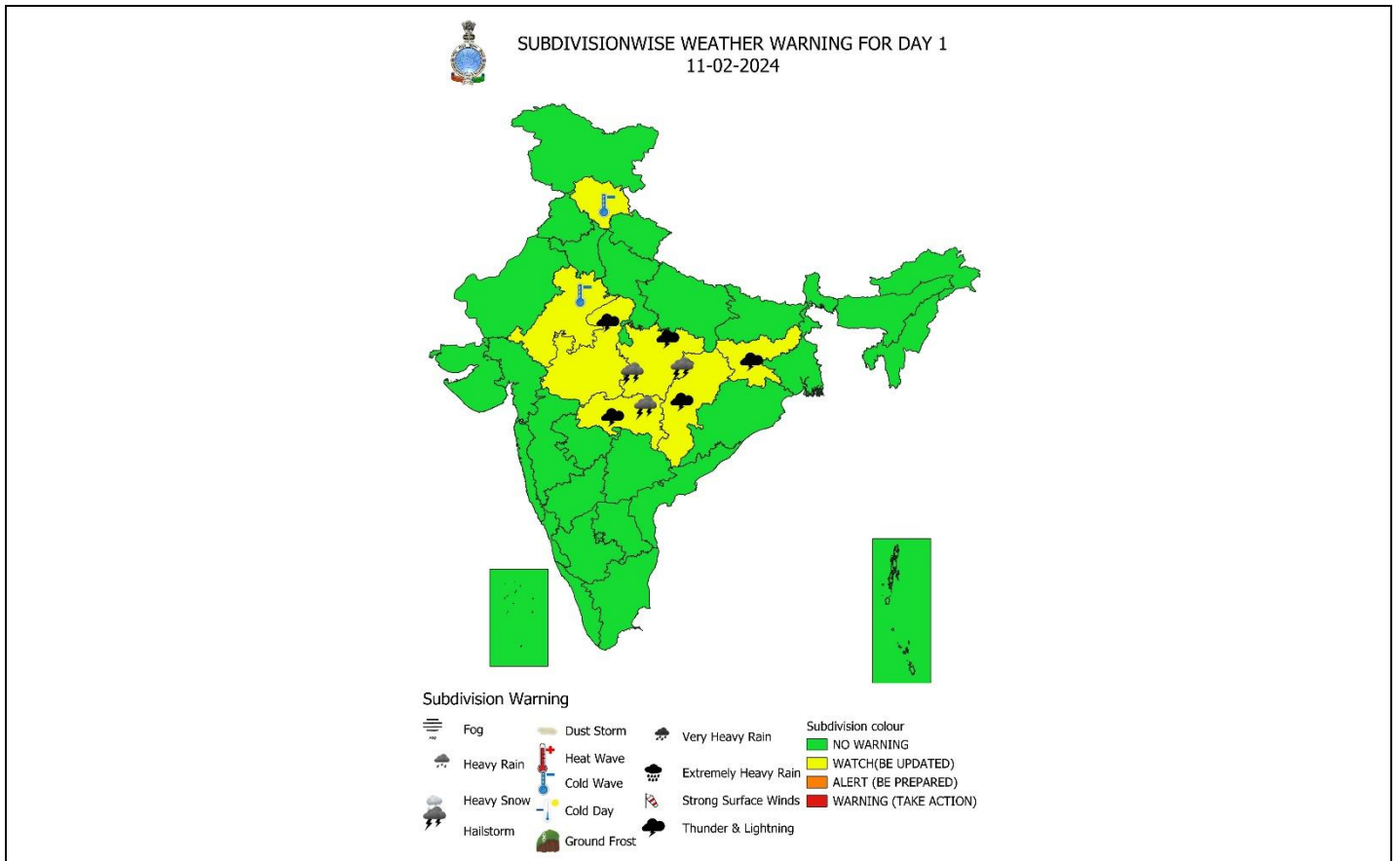
- ❖ Under the influence of trough from south interior Karnataka to west Vidarbha in lower tropospheric levels; isolated to scattered light to moderate rainfall accompanied with isolated thunderstorms, lightning & gusty winds (speed reaching 30-40 kmph) activity very likely over West Madhya Pradesh on 11th; East Madhya Pradesh and Jharkhand during 11th-13th, Vidarbha and Chhattisgarh on 11th & 12th; Bihar on 13th & 14th and Gangetic West Bengal on 14th February, 2024.
- ❖ **Isolated Hailstorms also likely over East Madhya Pradesh and adjoining North Chhattisgarh on 11th & 12th; over Vidarbha on 11th February, 2024.**
- ❖ Light isolated rainfall also likely over Odisha on 11th & 12th, 15th & 16th; over Telangana on 11th and over southeast Uttar Pradesh during 12th -14th February, 2024.

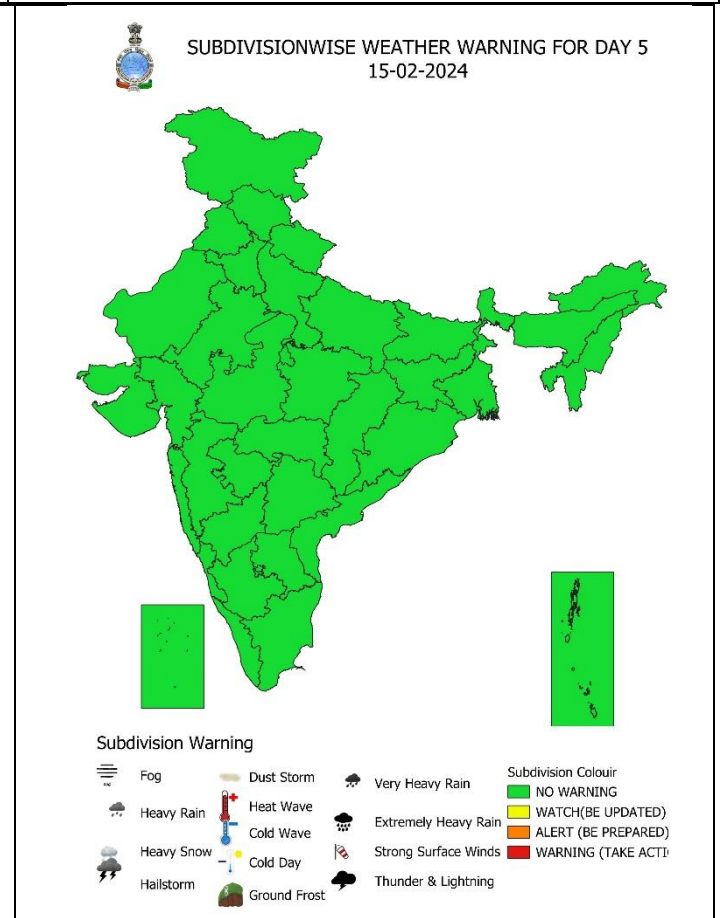
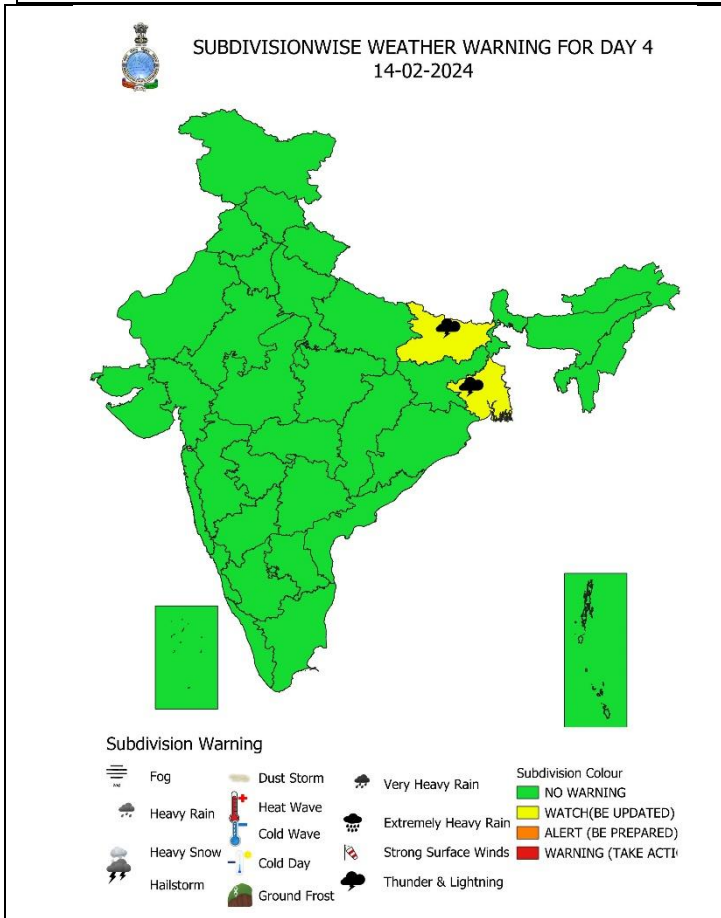
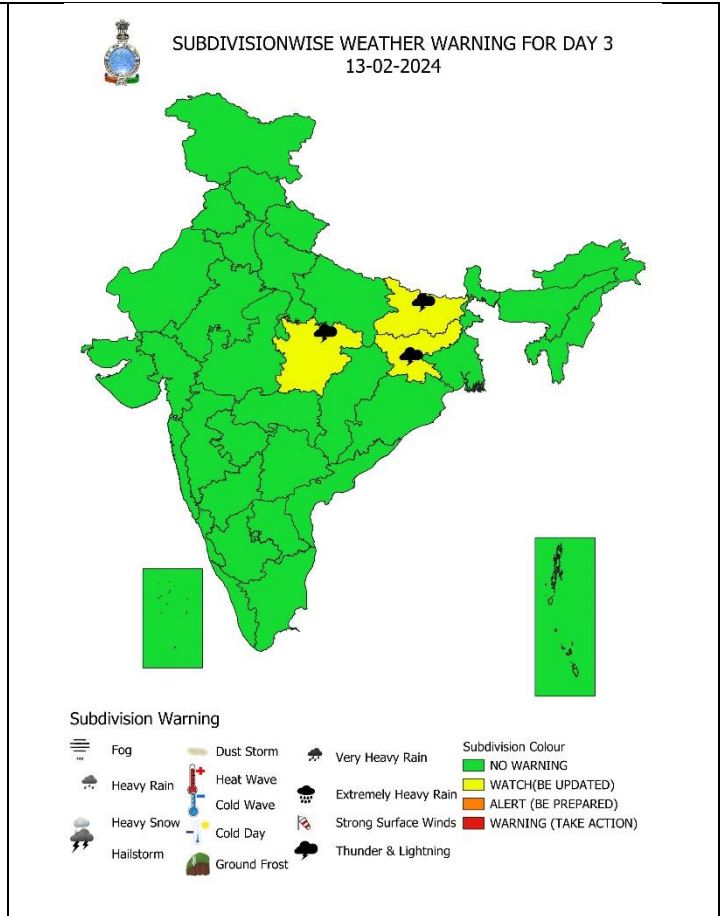
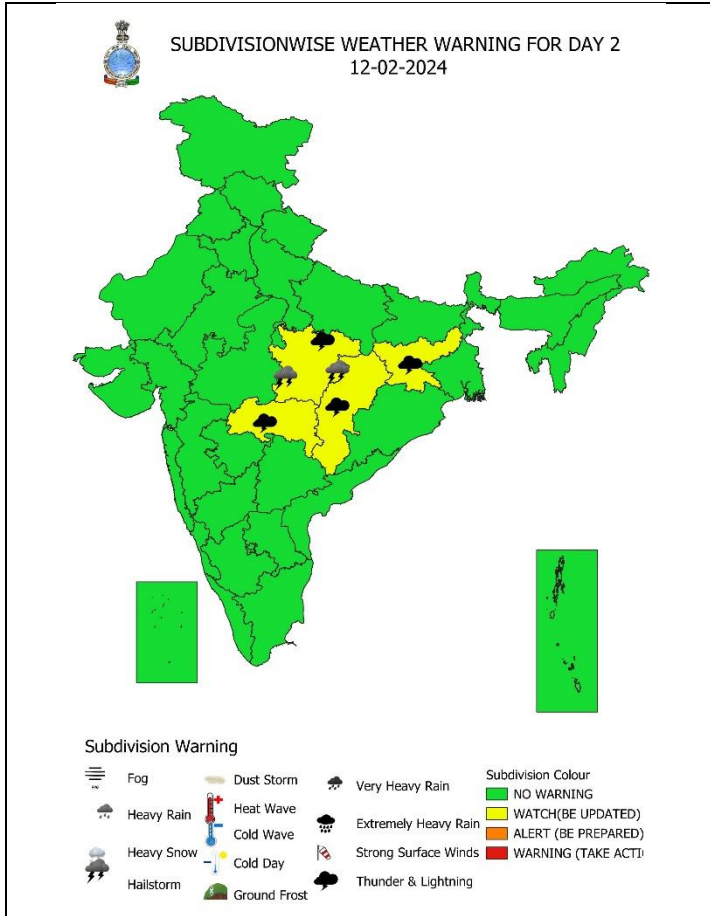
Minimum Temperature Forecast and Cold Wave warning: (graphics in Annexure I)

- ❖ Gradual Rise in minimum temperatures by 2-4°C very likely over Northwest India during next 5 days. Gradual Rise in minimum temperatures by 2-4°C also very likely over many parts of East India during next 3 days and no significant change thereafter. No significant change in minimum temperatures likely over Central India during next 5 days.
- ❖ **Cold wave** conditions very likely in isolated pockets over Himachal Pradesh and East Rajasthan on 12th February, 2024.

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

Annexure I





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 |