



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Date: 17<sup>th</sup> February, 2024

Time of Issue: 1300 hours IST

Special Message

FROM: INDIA METEOROLOGICAL DEPARTMENT  
TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS  
CONTROL ROOM NDMA  
SECRETARY, MOES  
DIRECTOR GENERAL, DOORDARSHAN  
DIRECTOR GENERAL, AIR  
PIB MOES  
CHIEF SECRETARY, GOVT. OF JAMMU & KASHMIR  
CHIEF SECRETARY, GOVT. OF LADAKH  
CHIEF SECRETARY, GOVT. OF HIMACHAL PRADESH  
CHIEF SECRETARY, GOVT. OF UTTARAKHAND  
CHIEF SECRETARY, GOVT. OF PUNJAB  
CHIEF SECRETARY, GOVT. OF HARYANA  
CHIEF SECRETARY, GOVT. OF CHANDIGARH  
CHIEF SECRETARY, GOVT. OF DELHI  
CHIEF SECRETARY, GOVT. OF UTTAR PRADESH  
CHIEF SECRETARY, GOVT. OF RAJASTHAN  
CHIEF SECRETARY, GOVT. OF MADHYA PRADESH

**Subject: An intense spell of rainfall/snowfall activity likely over Western Himalayan Region from night of 17th to 22nd February and adjoining plains of northwest India during 19th-22nd February 2024.**

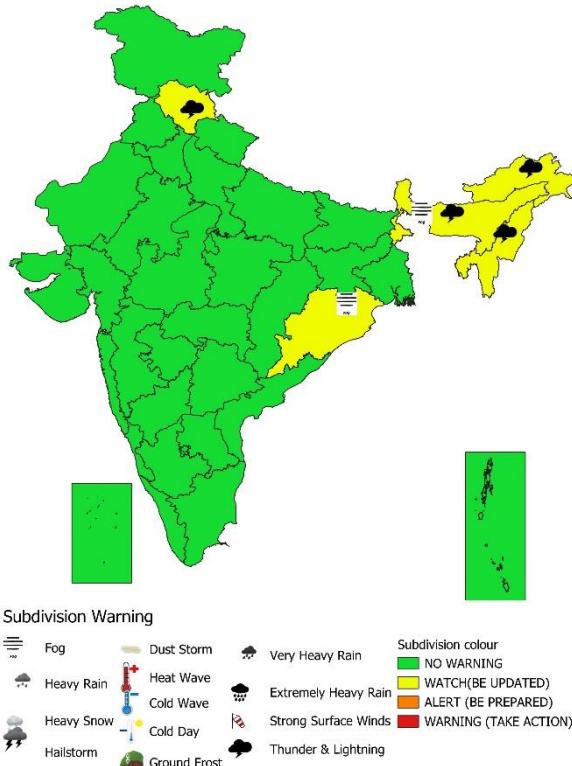
- ❖ A fresh active Western Disturbance is likely to affect northwest India from today night, the 17<sup>th</sup> February and under its influence:
  - Fairly widespread to widespread light/moderate rainfall/snowfall accompanied with **thunderstorms, lightning** over Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand) **during 17<sup>th</sup>-20<sup>th</sup> February, 2024.**
  - **Heavy rainfall** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 18<sup>th</sup> & 20<sup>th</sup> and over Uttarakhand on 19<sup>th</sup> & 20<sup>th</sup> February, 2024.
  - **Very Heavy rainfall** also very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 19<sup>th</sup> February, 2024.
  - **Hailstorm activity** very likely at isolated places over Jammu division on 18<sup>th</sup>; over Himachal Pradesh on 18<sup>th</sup> & 19<sup>th</sup> and over Uttarakhand during 18<sup>th</sup>-21<sup>st</sup> February, 2024.
  - Scattered to fairly widespread light/moderate rainfall very likely over Punjab, Haryana-Chandigarh-Delhi and West Uttar Pradesh during 19<sup>th</sup>-21<sup>st</sup>; East Uttar Pradesh during 20<sup>th</sup>-22<sup>nd</sup> and isolated light/moderate rainfall over north Rajasthan during 19<sup>th</sup>-21<sup>st</sup> and over north Madhya Pradesh during 20<sup>th</sup> -22<sup>nd</sup> February, 2024.
  - Isolated **thunderstorms, lightning and gusty winds** (speed reaching 30-40 gusting to 50 kmph) very likely over Punjab during 18<sup>th</sup>-21<sup>st</sup> and over Haryana-Chandigarh-Delhi and West Uttar Pradesh during 19<sup>th</sup>-21<sup>st</sup>; north Rajasthan during 19<sup>th</sup>-20<sup>st</sup> and over East Uttar Pradesh on 20<sup>th</sup> & 21<sup>st</sup> February, 2024.
  - **Hailstorm activity** very likely at isolated places over Punjab, Haryana and north Rajasthan on 19<sup>th</sup> & 20<sup>th</sup> and over West Uttar Pradesh on 20<sup>th</sup> February, 2024.

The state-wise forecast is given below:

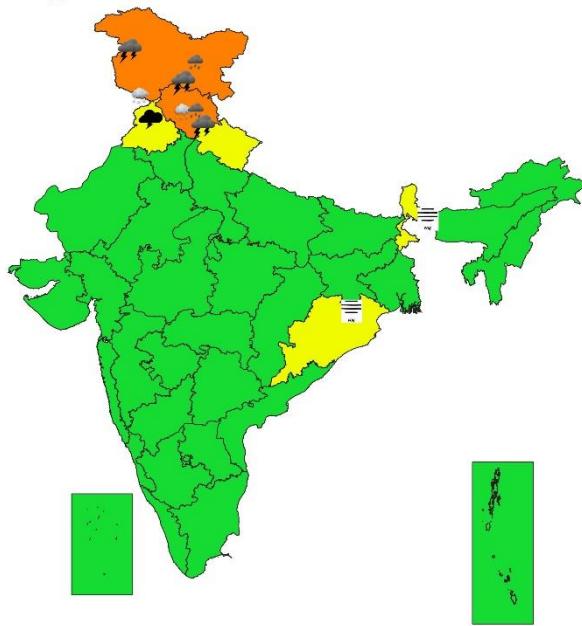
| S.No. | State/sub-division          | Forecast   |
|-------|-----------------------------|--|
| 1.    | Jammu, Kashmir and Ladakh   | <ul style="list-style-type: none"> <li>Light to moderate rain/snowfall accompanied with thunderstorm &amp; lightning at most places on 18<sup>th</sup> February.</li> <li><b>Very heavy rainfall/snowfall likely at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 18<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> <li><b>Hailstorm at isolated places likely over Jammu Division on 18<sup>th</sup> February.</b></li> </ul>  |
| 2.    | Himachal Pradesh            | <ul style="list-style-type: none"> <li>Light to moderate rain/snowfall accompanied with thunderstorm &amp; lightning at a few places on 17<sup>th</sup>; at many places on 18<sup>th</sup>; at most places on 19<sup>th</sup> February.</li> <li><b>Very heavy rainfall/snowfall likely at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 18<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> <li><b>Hailstorm at isolated places likely on 18<sup>th</sup> &amp; 19<sup>th</sup> February.</b></li> </ul>   |
| 3.    | Uttarakhand                 | <ul style="list-style-type: none"> <li>Light to moderate rain/snowfall accompanied with thunderstorm &amp; lightning at most places on 19<sup>th</sup> &amp; 20<sup>th</sup>; at a few places on 18<sup>th</sup>; at isolated places on 17<sup>th</sup> February.</li> <li><b>Very heavy rainfall/snowfall likely at isolated places on 19<sup>th</sup>; heavy rainfall/snowfall at isolated places on 20<sup>th</sup> February.</b></li> <li><b>Hailstorm at isolated places likely during 18<sup>th</sup>-21<sup>st</sup> February.</b></li> </ul> |
| 4.    | Punjab                      | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (40-50 kmph) at many places on 19<sup>th</sup> &amp; 20<sup>th</sup>; at isolated places on 18<sup>th</sup> February.</li> <li><b>Hailstorm at isolated places likely on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>   |
| 5.    | Haryana, Chandigarh & Delhi | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (40-50 kmph) at many places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li><b>Hailstorm at isolated places likely over Haryana on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>   |
| 6.    | West Uttar Pradesh          | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (30-40 kmph) at many places on 20<sup>th</sup>; at a few places on 19<sup>th</sup> February.</li> <li><b>Hailstorm at isolated places likely over West Uttar Pradesh on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>  |
| 7.    | East Uttar Pradesh          | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (30-40 kmph) at a few places on 20<sup>th</sup> &amp; 21<sup>st</sup> February.</li> </ul>  |
| 8.    | West Rajasthan              | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li><b>Hailstorm at isolated places likely over West Rajasthan on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>  |
| 9.    | East Rajasthan              | <ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at isolated places on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</li> <li><b>Hailstorm at isolated places likely over East Rajasthan on 19<sup>th</sup> &amp; 20<sup>th</sup> February.</b></li> </ul>  |
| 10    | North Madhya Pradesh        | <ul style="list-style-type: none"> <li>Light to moderate rainfall at isolated places during 20<sup>th</sup>-22<sup>nd</sup> February.</li> </ul>   |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
17-02-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
18-02-2024

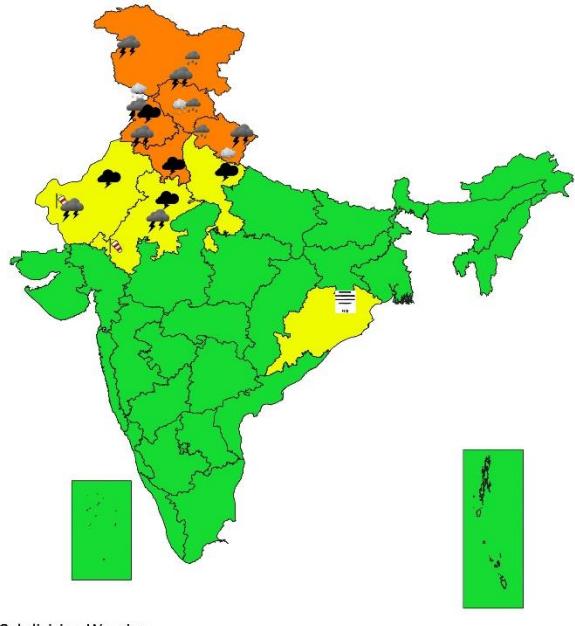


Subdivision Warning

|              |                     |                      |                       |
|--------------|---------------------|----------------------|-----------------------|
| Fog          | Dust Storm          | Very Heavy Rain      | Subdivision Colour    |
| Heavy Rain   | Heat Wave           | Extremely Heavy Rain | NO WARNING            |
| Heavy Snow   | Cold Wave           | Cold Day             | WATCH(BE UPDATED)     |
| Hailstorm    | Cold Day            | Strong Surface Winds | ALERT (BE PREPARED)   |
| Ground Frost | Thunder & Lightning | Thunder & Lightning  | WARNING (TAKE ACTION) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
19-02-2024

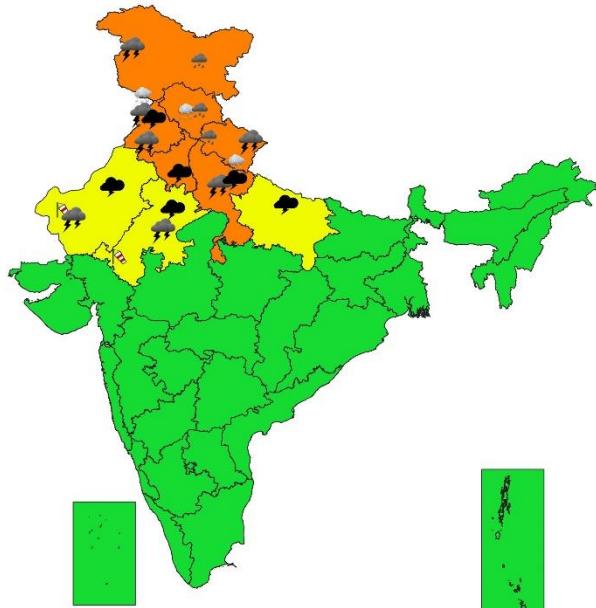


Subdivision Warning

|              |                     |                      |                       |
|--------------|---------------------|----------------------|-----------------------|
| Fog          | Dust Storm          | Very Heavy Rain      | Subdivision Colour    |
| Heavy Rain   | Heat Wave           | Extremely Heavy Rain | NO WARNING            |
| Heavy Snow   | Cold Wave           | Cold Day             | WATCH(BE UPDATED)     |
| Hailstorm    | Cold Day            | Strong Surface Winds | ALERT (BE PREPARED)   |
| Ground Frost | Thunder & Lightning | Thunder & Lightning  | WARNING (TAKE ACTION) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
20-02-2024



Subdivision Warning

- Fog
- Heavy Rain
- Heavy Snow
- Hailstorm

- Dust Storm
- Heat Wave
- Cold Wave
- Cold Day

- Very Heavy Rain
- Extremely Heavy Rain
- Strong Surface Winds
- Thunder & Lightning

Subdivision Colour

NO WARNING

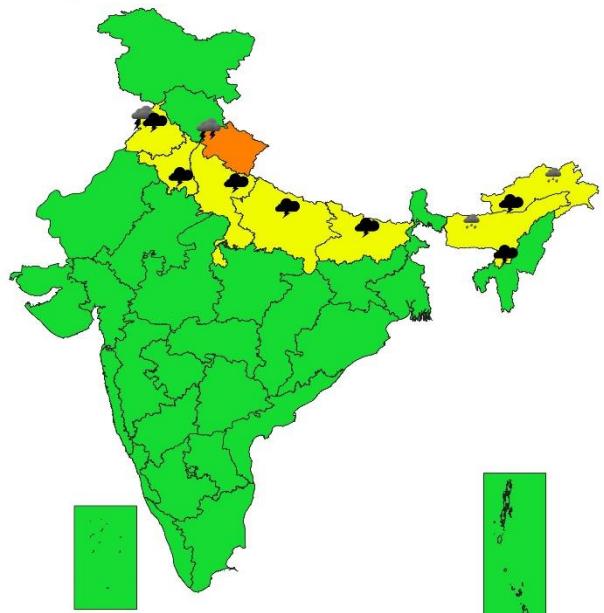
WATCH(BE UPDATED)

ALERT (BE PREPARED)

WARNING (TAKE ACTI!



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
21-02-2024



Subdivision Warning

- Fog
- Heavy Rain
- Heavy Snow
- Hailstorm

- Dust Storm
- Heat Wave
- Cold Wave
- Cold Day

- Very Heavy Rain
- Extremely Heavy Rain
- Strong Surface Winds
- Thunder & Lightning

Subdivision Colour

NO WARNING

WATCH(BE UPDATED)

ALERT (BE PREPARED)

WARNING (TAKE ACTI!

**Impact & Action Suggested due to heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 18<sup>th</sup>-20<sup>th</sup>; over Uttarakhand on 19<sup>th</sup> & 20<sup>th</sup> February, 2024.**

### Impacts Expected for Rain/Snow

- Disruption of Electricity.
- Landslide, rock fall and mudslides, Blocking/washout of roads/highways/bridges Nallahs.
- Disruption of traffic flow.
- Damage to Kuccha and unsecured structures.

### Suggested Actions

- Avoid roadway underpasses, drainage ditches, low lying areas and areas where water collects – they can unexpectedly flood or overflow.
- Stay away from power lines or electrical wires.
- Don't stay in kuchcha houses during heavy rainfall as it may collapse anytime soon
- Drive carefully.

**Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm:** Jammu division on 18th; over Himachal Pradesh on 18th & 19th; over Uttarakhand during 18th -21st; over Punjab and Haryana on 19th & 20th and over West Uttar Pradesh on 20th February, 2024.

### **Impact expected:**

- ❖ Strong wind/hail may damage plantation, horticulture and standing crops.
- ❖ Hail may injure people and cattle at open places.
- ❖ Partial damage to vulnerable structures due to strong winds.
- ❖ Minor damage to kutcha houses/walls and huts.
- ❖ Loose objects may fly.

### **Action suggested:**

- ❖ Stay indoors, close windows & doors and avoid travel if possible.
- ❖ Take safe shelters; do not take shelter under trees.
- ❖ Do not lie on concrete floors and do not lean against concrete walls.
- ❖ Unplug electrical/ electronic appliances.
- ❖ Immediately get out of water bodies.
- ❖ Keep away from all the objects that conduct electricity.

### **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

- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm

### Dust Storm

- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

### Subdivision color

- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- 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)

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