



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Date: 27<sup>th</sup> February, 2024

Time of Issue: 1230 hours IST

Special Message (No.- 1)

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 active Western Disturbance likely to affect Western Himalayan Region from 29<sup>th</sup> February and plains of northwest India from 01<sup>st</sup> March to 03<sup>rd</sup> March, 2024.**

**Weather Systems and Forecast & Warnings during next 5 days:**

- ❖ An active Western Disturbance likely to affect Western Himalayan Region from 29<sup>th</sup> February and plains of northwest India from 1<sup>st</sup> March to 3<sup>rd</sup> March with peak intensity on 1<sup>st</sup> & 2<sup>nd</sup> March, 2024. High moisture feeding from Arabian Sea to northwest India is also likely during 1<sup>st</sup> to 2<sup>nd</sup> March. Under its influence:
  - Fairly widespread to widespread light/moderate rainfall accompanied with thunderstorms & lightning very likely over Western Himalayan Region during 1<sup>st</sup> – 3<sup>rd</sup> March, 2024.
  - Scattered to fairly widespread light/moderate rainfall accompanied with thunderstorms & lightning very likely over Punjab, Haryana-Chandigarh-Delhi and isolated to scattered light/moderate rainfall over Uttar Pradesh, Rajasthan on 1<sup>st</sup> & 2<sup>nd</sup> March, 2024.
  - ***Isolated heavy rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 1<sup>st</sup> and isolated heavy to very heavy rainfall/snowfall on 2<sup>nd</sup> March 2024. Isolated heavy rainfall/snowfall also very likely over Uttarakhand and isolated heavy rainfall over Punjab on 02<sup>nd</sup> March, 2024.***
  - Hailstorm activity also very likely at isolated places over Himachal Pradesh and Uttarakhand on 1<sup>st</sup> & 2<sup>nd</sup> March; Rajasthan on 1<sup>st</sup> March and over Haryana-Chandigarh, Punjab and West Uttar Pradesh on 2<sup>nd</sup> March, 2024.

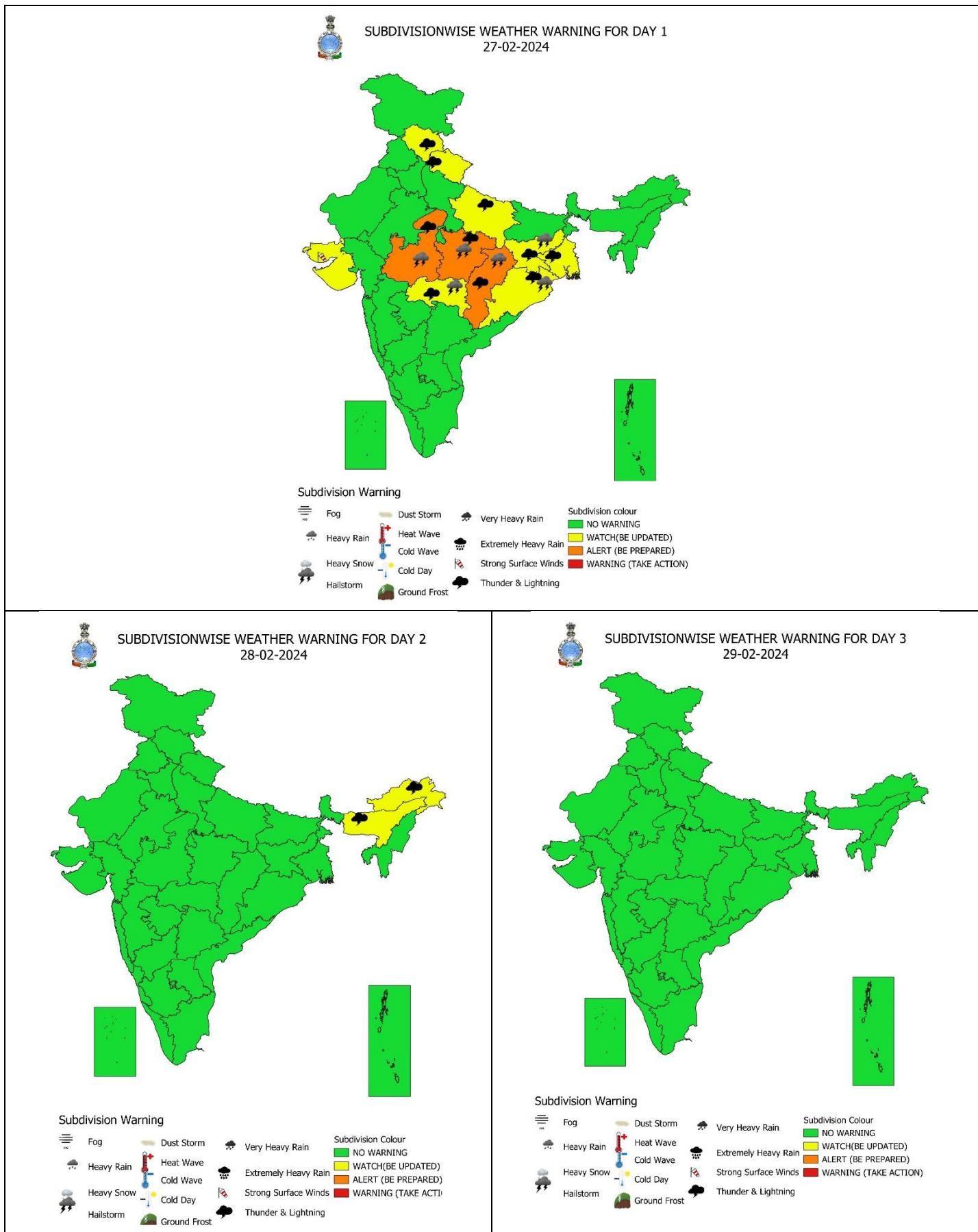
The state-wise forecast is given below: (Warning graphics are given at ANNEXURE-I)

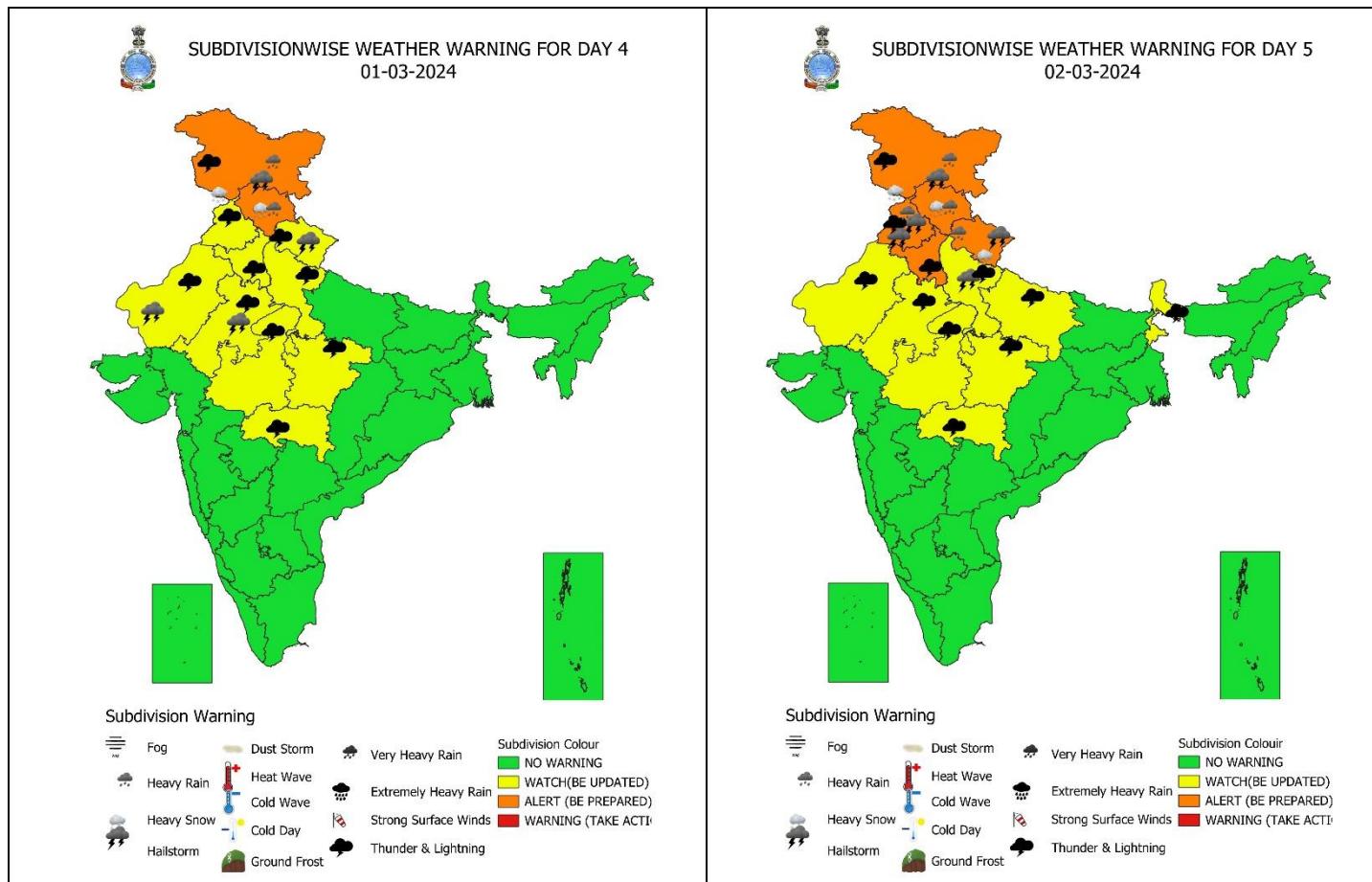
S. No.	State/sub-division	Forecast
1.	Jammu, Kashmir and Ladakh	<ul style="list-style-type: none"> <li>Light to moderate rain/snowfall accompanied with thunderstorm &amp; lightning at most places on 01<sup>st</sup> &amp; 02<sup>nd</sup> March; at a few places on 29<sup>th</sup> February &amp; 3<sup>rd</sup> March and at isolated places on 27<sup>th</sup> February &amp; 04<sup>th</sup> March.</li> <li><b>Heavy to very heavy rainfall/snowfall very likely at isolated places on 02<sup>nd</sup> March; Heavy rainfall/snowfall at isolated places on 01<sup>st</sup> March.</b></li> </ul>
2.	Himachal Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain/snowfall accompanied with thunderstorm, lightning and gusty winds (speed reaching 40-50 kmph gusting to 60 kmph) at most places on 01<sup>st</sup> &amp; 02<sup>nd</sup> March; at many places on 03<sup>rd</sup> March; at a few places on 27<sup>th</sup> February and at isolated places on 29<sup>th</sup> February &amp; 04<sup>th</sup> March.</li> <li><b>Heavy to very heavy rainfall/snowfall very likely at isolated places on 02<sup>nd</sup> March; Heavy rainfall/snowfall at isolated places on 01<sup>st</sup> March.</b></li> <li><b>Light to moderate hailstorm is likely at isolated places on 01<sup>st</sup> &amp; 02<sup>nd</sup> March.</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 02<sup>nd</sup> March; at many places on 01<sup>st</sup> &amp; 03<sup>rd</sup> March; at a few places on 27<sup>th</sup> February and at isolated places during 04<sup>th</sup> March.</li> <li><b>Heavy rainfall/snowfall at isolated places likely on 02<sup>nd</sup> March.</b></li> <li><b>Light to moderate hailstorm is likely at isolated places on 01<sup>st</sup> &amp; 02<sup>nd</sup> March.</b></li> </ul>
4.	Punjab	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning and gusty winds (speed reaching 40-50 kmph gusting to 60 kmph) at many places on 01<sup>st</sup> &amp; 02<sup>nd</sup> March; and at isolated places on 27<sup>th</sup> February and 03<sup>rd</sup> March.</li> <li><b>Heavy rainfall/snowfall at isolated places likely on 02<sup>nd</sup> March.</b></li> <li><b>Light to moderate hailstorm is likely at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
5.	Haryana, Chandigarh & Delhi	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning and gusty winds (speed reaching 30-40 kmph gusting to 50 kmph) at many places over 02<sup>nd</sup> March; at a few places during 01<sup>st</sup> March; at isolated places on 27<sup>th</sup> February &amp; 03<sup>rd</sup> March.</li> <li><b>Light to moderate hailstorm is likely at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
6.	West Uttar Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at a few places over 01<sup>st</sup> March; with gusty winds (speed reaching 30-40 kmph gusting to 50 kmph) at a few places on 02<sup>nd</sup> March; at isolated places on 27<sup>th</sup> February &amp; 03<sup>rd</sup> March.</li> <li><b>Light to moderate hailstorm is likely at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
7.	East Uttar Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at a few places on 02<sup>nd</sup> March; at isolated places on 27<sup>th</sup> February, 01<sup>st</sup>, 03<sup>rd</sup> &amp; 04<sup>th</sup> March.</li> </ul>

8.	West Rajasthan	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (speed reaching upto 40-50 kmph gusting to 60 kmph) at isolated places on 27<sup>th</sup> February, 01<sup>st</sup> &amp; 02<sup>nd</sup> March.</li> <li><b>Light to moderate hailstorm is likely at isolated places on 01<sup>st</sup> March.</b></li> </ul>
9.	East Rajasthan	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) at isolated places on 27<sup>th</sup> February, 01<sup>st</sup> &amp; 02<sup>nd</sup> March.</li> <li><b>Light to moderate hailstorm is likely at isolated places on 01<sup>st</sup> March.</b></li> </ul>
10	West Madhya Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) at isolated places on 27<sup>th</sup>, 29<sup>th</sup> February, 01<sup>st</sup> &amp; 02<sup>nd</sup> March</li> </ul>
11	East Madhya Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at isolated places on 28<sup>th</sup>, 29<sup>th</sup> February; with gusty, squally winds (speed reaching upto 50-60 kmph gusting to 70 kmph) at many places on 27<sup>th</sup> February; with gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) at a few places on 02<sup>nd</sup> March, at isolated places on 01<sup>st</sup>, 02<sup>nd</sup>, 04<sup>th</sup> March.</li> </ul>

For more details, kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forcast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php)

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**Impact & Action Suggested due to heavy/very heavy rainfall/snowfall:** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh on 1<sup>st</sup> & 2<sup>nd</sup> and Uttarakhand on 2<sup>nd</sup> March, 2024.

### **Impacts Expected:**

- 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.

### **Action Suggested:**

- 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:** over Madhya Pradesh on 27<sup>th</sup> February and over Himachal Pradesh, Uttarakhand on 01<sup>st</sup> & 02<sup>nd</sup> March; Rajasthan on 01<sup>st</sup> March and over Haryana-Chandigarh, Punjab and West Uttar Pradesh on 02<sup>nd</sup> March, 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.

**Agromet advisories for rainfall accompanied with Heavy rainfall, Gusty winds and hailstorms likely over various parts of the country**

- Drain out excess water from crop fields to avoid water stagnation in Jammu & Kashmir and Himachal Pradesh.
- Make necessary arrangements to drain out excess water from the crop fields in Uttarakhand, Punjab, Arunachal Pradesh and Sub Himalayan West Bengal & Sikkim.
- Remove snow immediately from the branches and crotches in Jammu & Kashmir and Himachal Pradesh.
- Postpone sowing of French bean & Potato in Uttarakhand and direct sowing of vegetables in Jammu & Kashmir.
- Use hail nets or hail caps in fruit orchards to protect them from mechanical damage in Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh and north Rajasthan.
- Keep harvested produce in safe places.
- Provide mechanical support to horticultural crops and staking to vegetables.

### Legends & abbreviations:

- ❖ **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; **PTO:** Part Time Office.
- ❖ **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.

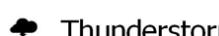
### SPATIAL DISTRIBUTION (% of Stations reporting)

% 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



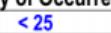
Strong Surface Winds



Heat Wave



Cold wave

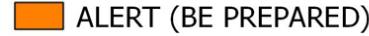


Fog

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)