



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Date: 02<sup>nd</sup> March, 2024  
Time of Issue: 1345 hours IST

**Special Message (No. 5)**

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: Intense spell of rainfall/snowfall over Western Himalayan Region and moderate to intense thunderstorm/hailstorm activity over the plains of Northwest and adjoining Central India likely to continue today, the 02<sup>nd</sup> March and decrease thereafter.**

**Realised weather during past 24 hours till 0830 hours IST of today:**

- ❖ **Light to moderate rainfall/snowfall** at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand; at isolated places over Arunachal Pradesh.
- ❖ **Light to moderate rainfall** at many places over Punjab, West Uttar Pradesh; at a few places over Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh; at isolated places over East Uttar Pradesh and Saurashtra & Kutch.
- ❖ **Heavy rainfall/snowfall** occurred at isolated places over Jammu & Kashmir, and Himachal Pradesh.
- ❖ Isolated **hailstorm** observed over Jammu-Kashmir, Himachal Pradesh, Haryana, Rajasthan and Madhya Pradesh.

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

- ❖ **A Western Disturbance as a cyclonic circulation lies over central Afghanistan & neighbourhood and a trough runs from this cyclonic circulation to North Arabian Sea in lower & middle tropospheric levels. An induced cyclonic circulation lies over north Pakistan & adjoining Punjab in lower tropospheric levels. High moisture feeding from Arabian Sea to northwest India and is likely to continue today, the 02<sup>nd</sup> March, 2024. Under their influence:**

- Fairly widespread to widespread light/moderate rainfall/snowfall accompanied with **thunderstorms & lightning** very likely over **Western Himalayan Region till 03<sup>rd</sup> March, 2024** and significant reduction in distribution and intensity thereafter.
- Fairly widespread to widespread light/moderate rainfall accompanied with **thunderstorms, lightning & gusty winds (40-50 kmph)** very likely over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and isolated to scattered light/moderate rainfall over Rajasthan, Gujarat State and Madhya Pradesh on 02<sup>nd</sup> March and decrease in distribution and intensity thereafter.
- **Isolated heavy to very heavy rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh; isolated heavy rainfall/snowfall also very likely over Uttarakhand and Punjab on 02<sup>nd</sup> March, 2024.**
- **Hailstorm activity also very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh, Madhya Pradesh on 02<sup>nd</sup> March, 2024.**

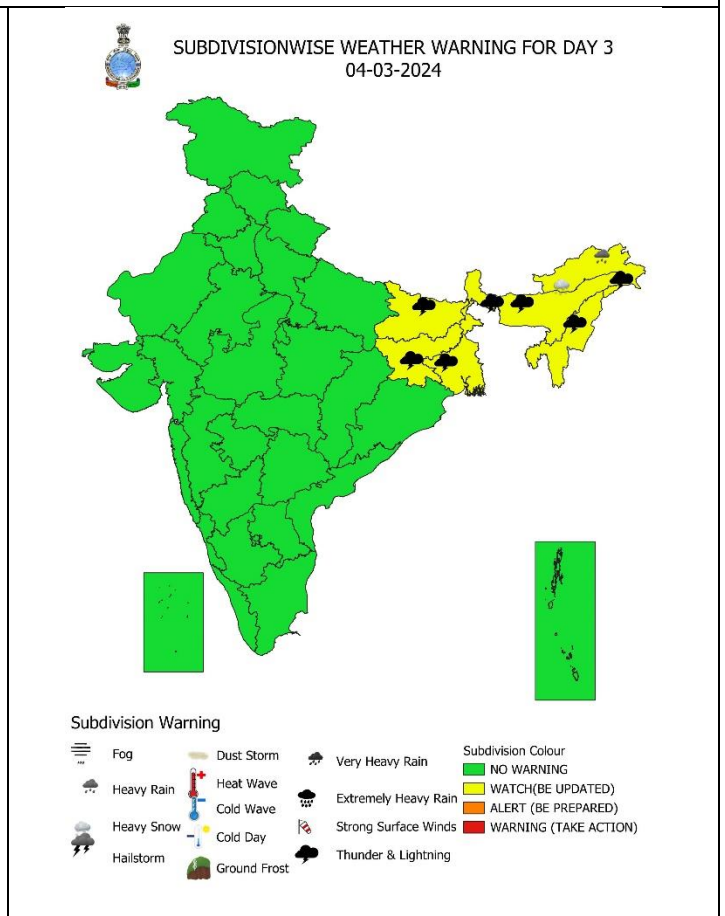
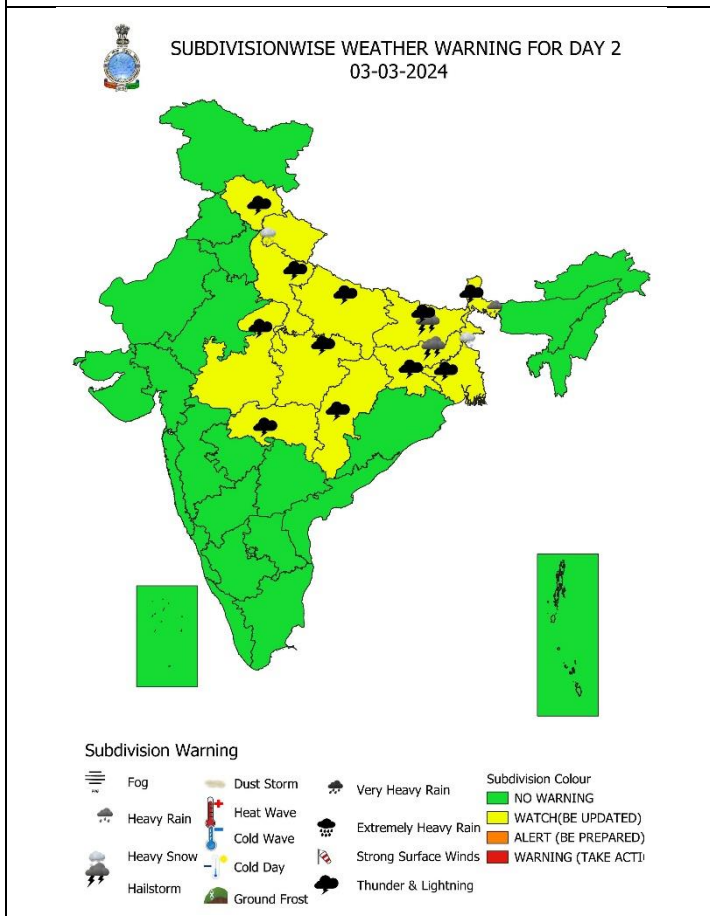
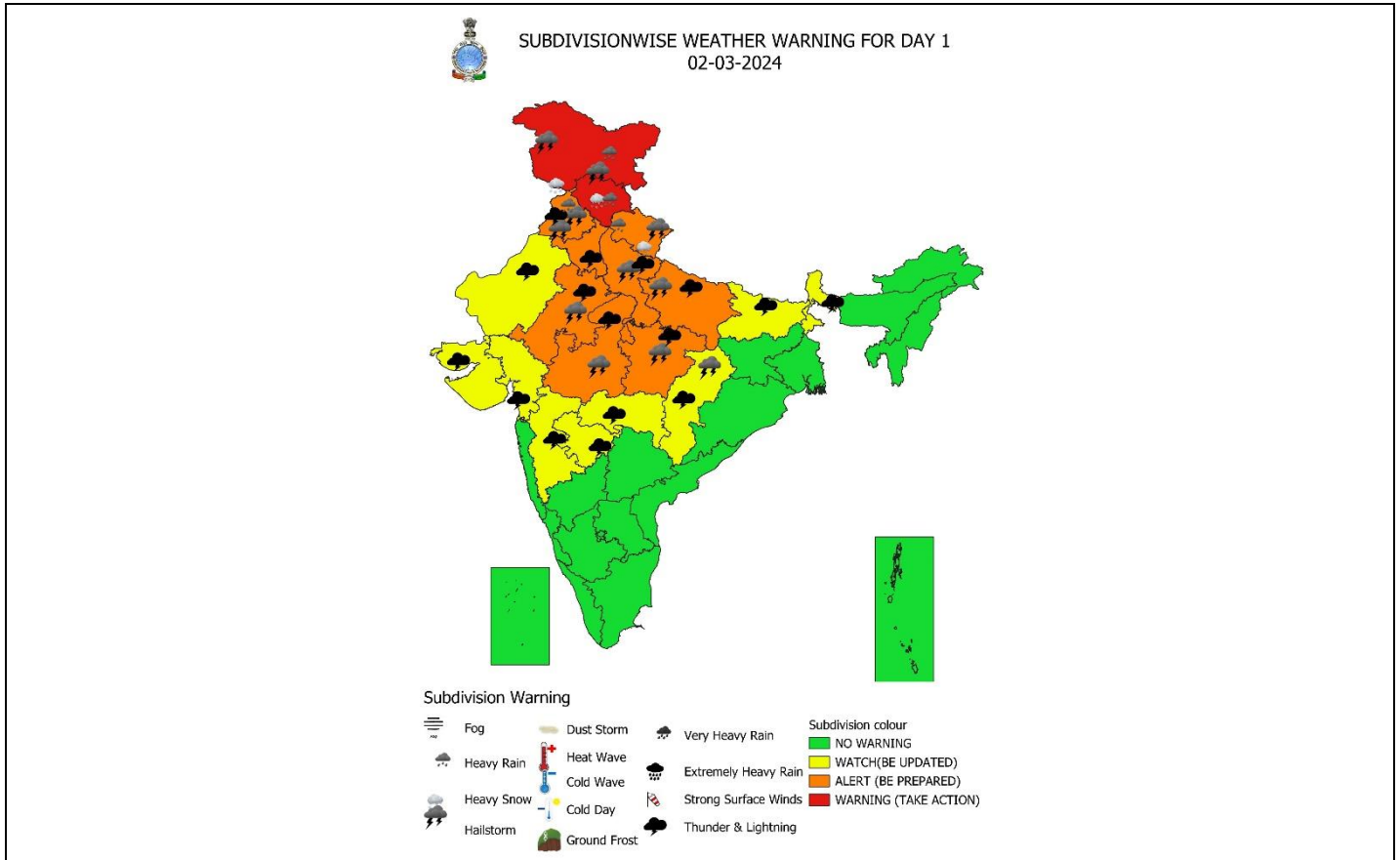
The state-wise forecast is given below: (Warning graphics are given at **ANNEXURE-I**)

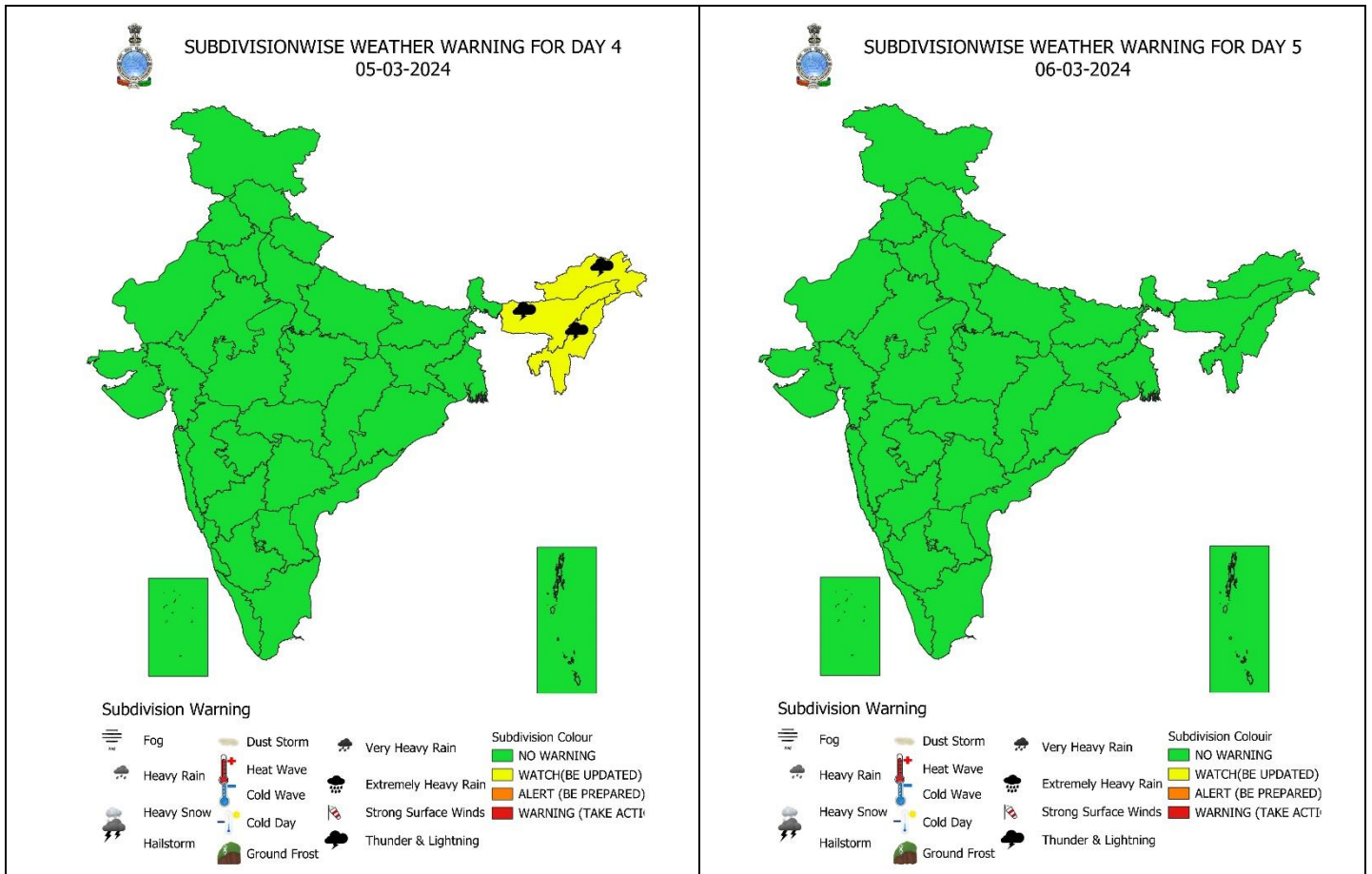
S. No.	State/sub-division	Forecast
1.	Jammu, Kashmir and Ladakh	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at most places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup> March.</li> <li>• Light to moderate rain/snowfall at some places on 03<sup>rd</sup>; at isolated places on 04<sup>th</sup> March.</li> <li>• <b>Heavy to very heavy rainfall/snowfall at isolated places on 02<sup>nd</sup> March.</b></li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
2.	Himachal Pradesh	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at most places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup> March.</li> <li>• Light to moderate rain/snowfall at many places on 03<sup>rd</sup>; at isolated places on 04<sup>th</sup> March.</li> <li>• <b>Heavy to very heavy rainfall/snowfall at isolated places on 02<sup>nd</sup> March.</b></li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
3.	Uttarakhand	<ul style="list-style-type: none"> <li>• Light to moderate rain/snowfall at most places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup> March.</li> <li>• Light to moderate rain/snowfall at many places accompanied with isolated thunderstorm &amp; lightning on 03<sup>rd</sup> March. Light to moderate rain/snowfall at isolated places on 04<sup>th</sup> March.</li> <li>• <b>Heavy rainfall/snowfall at isolated places on 02<sup>nd</sup> March.</b></li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
4.	Punjab	<ul style="list-style-type: none"> <li>• Light to moderate rain at most places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 50-60 kmph) on 02<sup>nd</sup> March.</li> </ul>

		<ul style="list-style-type: none"> <li>• Light to moderate rainfall at isolated places on 03<sup>rd</sup> March.</li> <li>• <b>Heavy rainfall at isolated places on 02<sup>nd</sup> March.</b></li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
5.	<b>Haryana, Chandigarh &amp; Delhi</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain at many places accompanied with isolated thunderstorm, lightning &amp; with gusty winds (speed reaching 50-60 kmph) on 02<sup>nd</sup> March over Haryana &amp; Chandigarh.</li> <li>• Light to moderate rainfall at isolated places on 03<sup>rd</sup> March.</li> <li>• Generally cloudy sky; light to moderate rain/ thundershowers with gusty winds (speed 40-50 kmph) on 2<sup>nd</sup> March over Delhi.</li> <li>• <b>Hailstorm at isolated places over Haryana, Chandigarh &amp; Delhi on 02<sup>nd</sup> March.</b></li> </ul>
6.	<b>West Uttar Pradesh</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain at most places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup>; at some places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 30-40 kmph) on 03<sup>rd</sup> March.</li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
7.	<b>East Uttar Pradesh</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain at many places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup>; at some places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 30-40 kmph) on 03<sup>rd</sup> March.</li> <li>• Light to moderate rainfall at isolated places on 04<sup>th</sup> March.</li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
8.	<b>West Rajasthan</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain accompanied with thunderstorm &amp; lightning at isolated places at isolated places on 02<sup>nd</sup> March.</li> </ul>
9.	<b>East Rajasthan</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain at some places accompanied with isolated thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph) on 02<sup>nd</sup> March.</li> <li>• <b>Hailstorm at isolated places on 02<sup>nd</sup> March.</b></li> </ul>
10.	<b>Madhya Pradesh</b>	<ul style="list-style-type: none"> <li>• Light to moderate rain at some places accompanied with thunderstorm &amp; lightning, gusty winds (speed reaching 30-40 kmph) at isolated places on 02<sup>nd</sup> March.</li> <li>• Light to moderate rain at isolated places on 03<sup>rd</sup> March and over northeast Madhya Pradesh on 04<sup>th</sup> March.</li> <li>• <b>Hailstorm is likely at isolated places on 02<sup>nd</sup> March.</b></li> </ul>

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

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**NWFC, IMD New Delhi**





**Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Punjab, Haryana, Chandigarh, Uttar Pradesh, north Madhya 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.

**Impact & Action Suggested due to heavy to very heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 02<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 kuccha houses during heavy rainfall as it may collapse anytime soon
- Drive carefully.

**Agromet advisories for Heavy rainfall, Gusty winds and hailstorms likely over various parts of the country  
(Based on the IBF and advisories issued by different AMFUs and DAMUs)**

- ❖ Harvest the matured wheat, jowar and gram in Madhya Maharashtra and Marathwada; mustard in North Rajasthan and Madhya Pradesh as early as possible and keep the harvested produce at safer places.
- ❖ Drain out excess water from crop fields to avoid water stagnation in Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- ❖ Use hail nets or hail caps in fruit orchards to protect them from mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand and Bihar.
- ❖ Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Punjab and Sikkim.
- ❖ Keep harvested produce in safe places.

## 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	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)