



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 29<sup>th</sup> March, 2024

Time of Issue: 1315 hours IST

**Subject:**

- i. **Light to moderate Rainfall/thunderstorm activity over Northwest India during 29<sup>th</sup>-31<sup>st</sup> with possibility of isolated heavy falls over Western Himalayan Region on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.**
- ii. **A fresh spell of intense rainfall/thunderstorm likely over Northeast India from 30<sup>th</sup> March to 01<sup>st</sup> April, 2024.**

**Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)**

- ❖ **Light/Moderate rainfall/snowfall** accompanied with thunderstorm recorded at isolated places over Arunachal Pradesh, Sikkim, Jammu-Kashmir and Himachal Pradesh.
- ❖ **Light/Moderate rainfall** accompanied with thunderstorm recorded at a few places over Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe; at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal, Odisha, Jharkhand, Punjab, Madhya Maharashtra, Marathwada, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy rainfall** recorded at isolated places over Tripura.
- ❖ **Warm night conditions** prevailed in isolated pockets over West Madhya Pradesh, Madhya Maharashtra, Marathwada and Gujarat Region.
- ❖ **Heat wave conditions** prevailed in isolated pockets over West Madhya Pradesh.

**Weather Systems and Forecast & Warnings: (Annexure II)**

- ❖ A cyclonic circulation lies over south Assam and another over Odisha in lower tropospheric levels. Under the influence of these systems:
  - ✓ Isolated to scattered rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 29<sup>th</sup> and increase thereafter with fairly widespread to widespread light to moderate rainfall/snowfall with isolated **thunderstorms & lightning** over Arunachal Pradesh and scattered to fairly widespread rainfall over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 30<sup>th</sup> March-04<sup>th</sup> April, 2024.
  - ✓ **Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh and isolated heavy rainfall over Assam & Meghalaya during 30<sup>th</sup> March-01<sup>st</sup> April with possibility of isolated very heavy falls on 31<sup>st</sup> March, 2024. Isolated heavy rainfall likely over Nagaland, Manipur, Mizoram & Tripura on 01<sup>st</sup> April, 2024.**
  - ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** very likely over Odisha on 29<sup>th</sup> & 30<sup>th</sup> March; Gangetic West Bengal during 29<sup>th</sup> March-01<sup>st</sup> April; Jharkhand on 30<sup>th</sup> March and Bihar on 30<sup>th</sup> & 31<sup>st</sup> March, 2024.

- ❖ A Western Disturbance seen as a cyclonic circulation over Iran & neighbourhood in lower tropospheric levels with a trough aloft in middle & upper tropospheric westerlies roughly along Long. 58°E to the north of Lat. 20°N. An induced cyclonic circulation lies over northwest Rajasthan & neighbourhood in lower tropospheric levels. Under their influence:
  - ✓ Fairly widespread to widespread light to moderate rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup> and Uttarakhand during 29<sup>th</sup>-31<sup>st</sup> March, 2024.
  - ✓ Isolated **heavy rainfall/snowfall** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup> and Uttarakhand on 31<sup>st</sup> March, 2024.
  - ✓ Isolated/Scattered light to moderate rainfall with **thunderstorms & lightning** very likely over Punjab and Haryana, Chandigarh during 29<sup>th</sup>-31<sup>st</sup>; Rajasthan and Uttar Pradesh on 29<sup>th</sup> & 30<sup>th</sup> March, 2024.
  - ✓ Isolated **hailstorm** also very likely over Himachal Pradesh, Punjab and Haryana & Chandigarh on 29<sup>th</sup> & 30<sup>th</sup> and Uttarakhand during 29<sup>th</sup>-31<sup>st</sup> March, 2024.
- ❖ A cyclonic circulation lies over southwest Madhya Pradesh & neighbourhood and a trough/wind discontinuity runs from north Tamil Nadu to cyclonic circulation over southwest Madhya Pradesh in lower tropospheric levels. Under the influence of these systems:
  - ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** very likely over West Madhya Pradesh and Kerala & Mahe on 29<sup>th</sup>; East Madhya Pradesh, Madhya Maharashtra, Marathwada & Chhattisgarh on 29<sup>th</sup> & 30<sup>th</sup> and Vidarbha on 30<sup>th</sup> March, 2024.

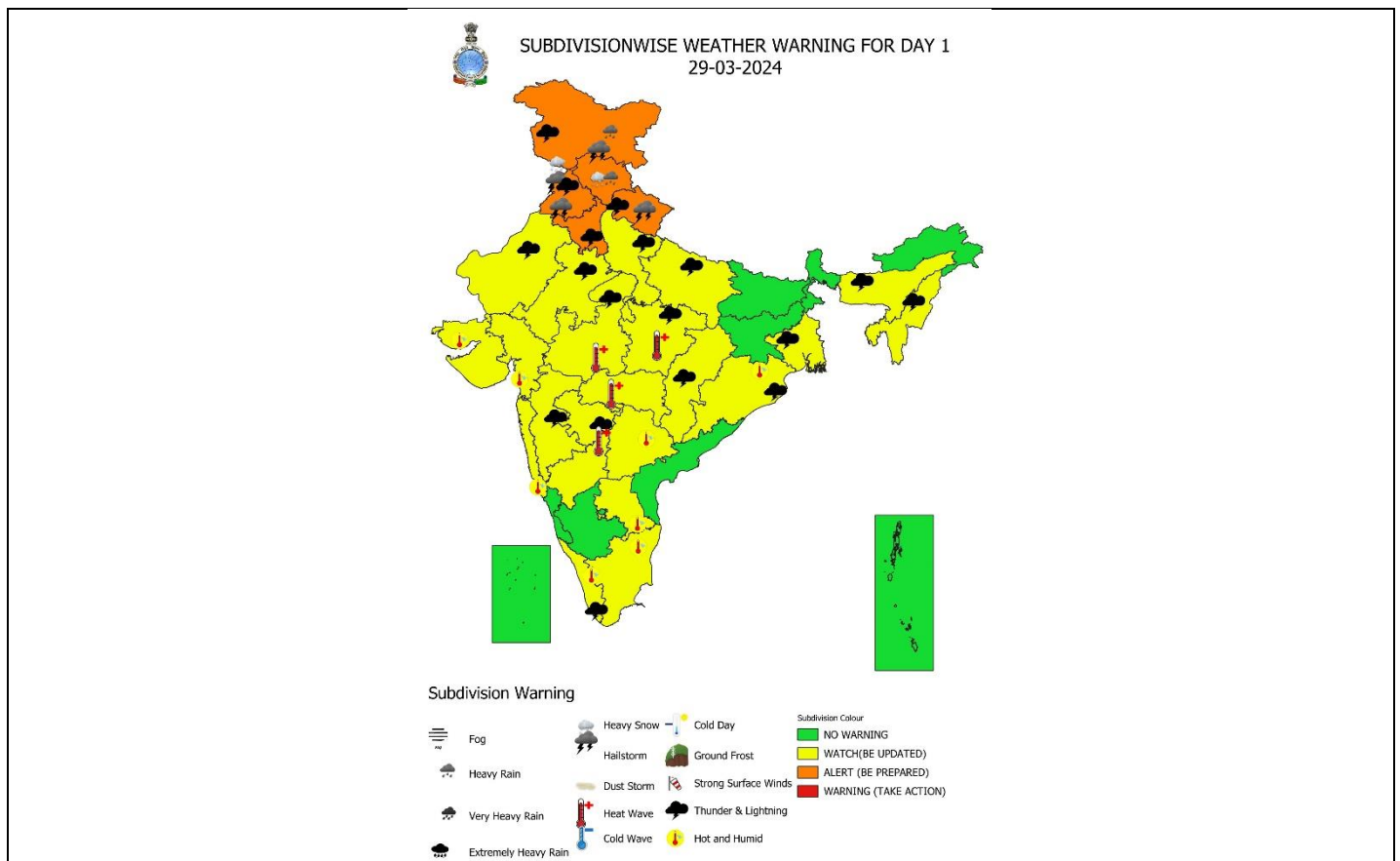
#### Maximum temperature observation and forecast for next 5 days:

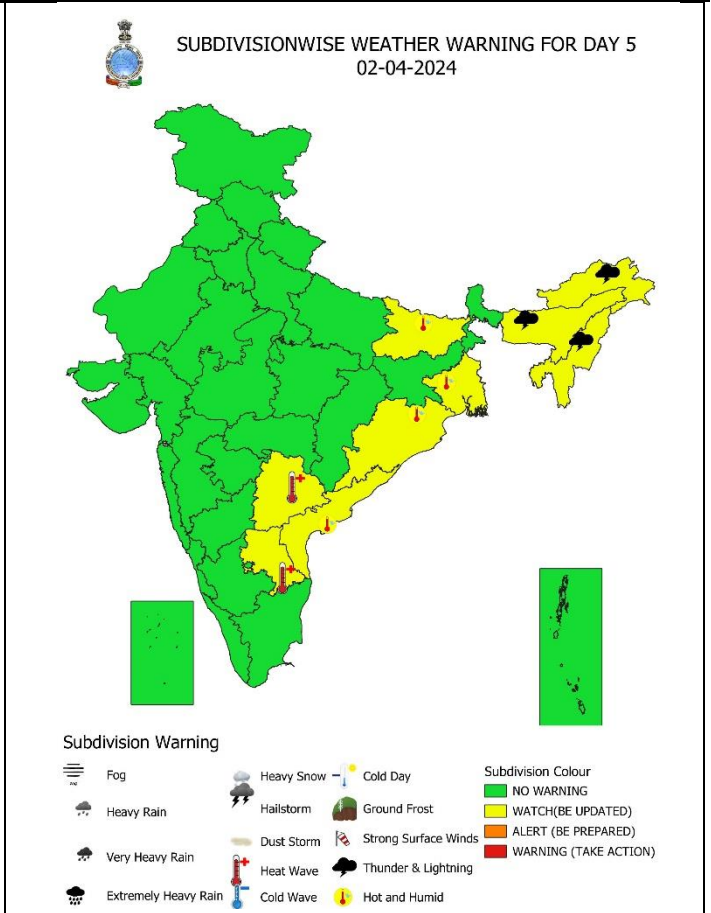
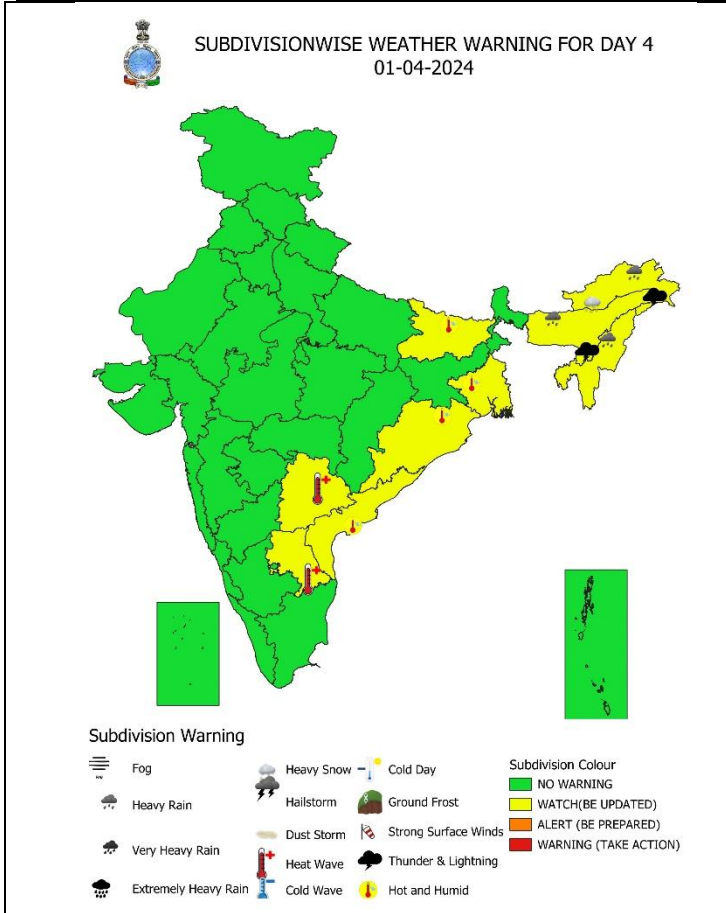
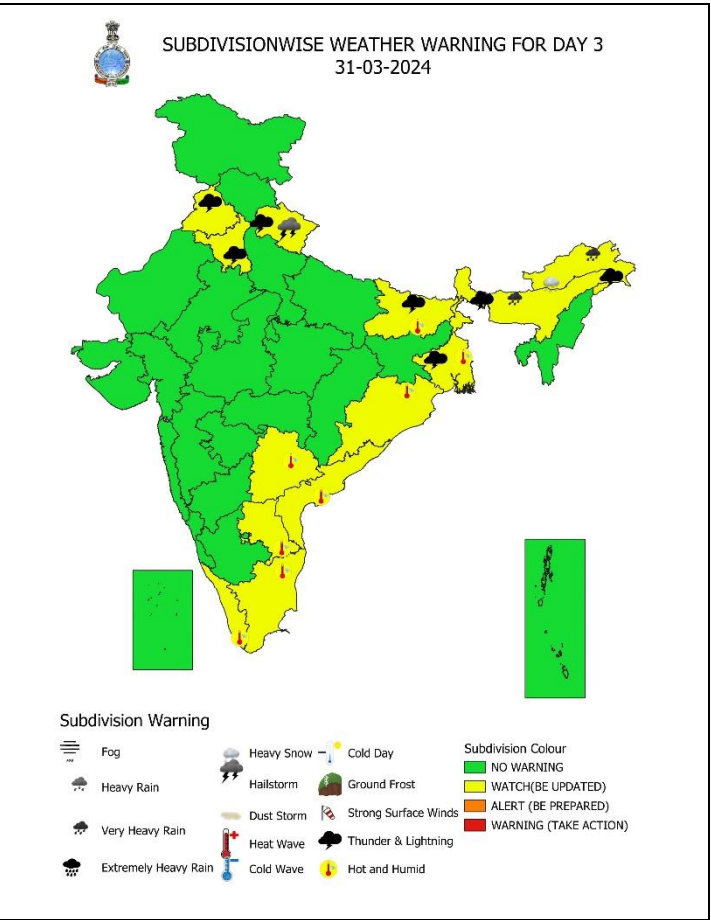
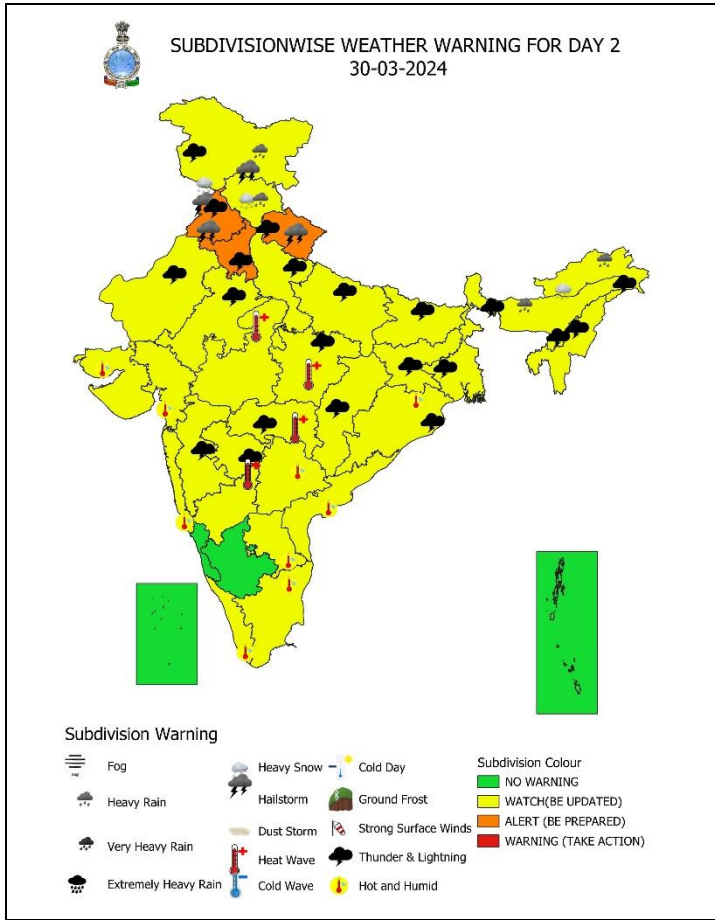
- ❖ Yesterday, the maximum temperatures were in the range 40-42°C at many places over Vidarbha; at some places over Madhya Pradesh, Marathwada, Madhya Maharashtra, Gujarat and Rayalaseema which were above normal by 3-4°C; in the range 36-39°C over at many parts of peninsular & East India except Bihar; at some parts over Rajasthan, Haryana-Chandigarh-Delhi and Uttar Pradesh and at isolated pockets over Gangetic West Bengal and Jharkhand which were above normal by 1-2°C; in the range 30-35°C at many parts over Punjab which were near normal.
- ❖ Yesterday, 95<sup>th</sup> percentile of maximum temperature departures were in the range of 2-4°C in isolated pockets of southwest Uttar Pradesh, north Madhya Pradesh and in the range of 4-6°C over Marathwada. It is likely to continue in the range of 4-6°C over Marathwada till 29<sup>th</sup> and decrease thereafter to fall in the range of 2-4°C till 30<sup>th</sup> March over Madhya Pradesh and Marathwada and decrease further thereafter to the range of 0-2°C over the region.
- ❖ Fall in maximum temperatures by 2-4°C very likely over many parts of Northwest India during next 3 days and no significant change thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over many parts of Central & East India during next 2 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during next 5 days.
- ❖ **Heat wave conditions** very likely in isolated pockets over Madhya Pradesh, Vidarbha and North Interior Karnataka on 29<sup>th</sup> & 30<sup>th</sup> March and Rayalaseema & Telangana on 01<sup>st</sup> & 02<sup>nd</sup> April, 2024.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over Madhya Pradesh, Vidarbha, Madhya Maharashtra, Marathwada on 29<sup>th</sup> & 30<sup>th</sup> and Gujarat Region on 29<sup>th</sup> March, 2024.
- ❖ **Hot and humid weather** very likely to prevail over Odisha during 29<sup>th</sup> March-02<sup>nd</sup> April; Gangetic West Bengal, Bihar during 31<sup>st</sup> March-02<sup>nd</sup> April; Konkan & Goa, Gujarat state during 29<sup>th</sup> & 30<sup>th</sup> March; over Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 29<sup>th</sup> March-01<sup>st</sup> April; north Coastal Andhra Pradesh during 30<sup>th</sup> March-02<sup>nd</sup> April, 2024.

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)

**Heavy Rainfall recorded during past 24 hours:**

- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Sonamura Mohanbhog (dist Sepahijala) 8, Belonia (dist South Tripura) 6, Sonamura (dist Sipahijala) 5, Kvk South (dist South Tripura) 5, Sabroom (dist South Tripura) 3, Kamalpur\_aws (dist Dhalai) 2;
- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Gund (dist Ganderbal) 4, Shalimar Agro (dist Srinagar), Srinagar (dist Srinagar), Rambagh Aws (dist Srinagar) 3 each;
- ❖ **Kerala & Mahe:** Alappuzha & Konni (Pathanamthitta district) 4 each, Kanjirappally (Kottayam district) & Peringamala ARG (Thiruvananthapuram district) 3 each, Thiruvananthapuram Airport, Kottayam, Kollam, Cherthala (Alappuzha district), Myladumpara (Idukki district), Chavara AWS (Kollam district) & Seethathode AWS (Pathanamthitta district) 2 each;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Tuticorin (dist Thoothukudi) 4, Kayalpattinam (dist Thoothukudi) 3, Kanniyakumari (distKanniyakumari), Karuppanadhi Dam (dist Tenkasi) 1 each;
- ❖ **Assam & Meghalaya:** Mawkyrwat (dist South West Khasi Hills), Mawkyrwat\_arg (dist South West KhasiHills), Mawsynram (dist East Khasi Hills) 1 each.







**Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm over Uttarakhand during 29<sup>th</sup>-31<sup>st</sup>; Himachal Pradesh, Punjab and Haryana & Chandigarh on 29<sup>th</sup> & 30<sup>th</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 kutchha 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/very heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh on 29<sup>th</sup> & 30<sup>th</sup> March; Arunachal Pradesh and Assam & Meghalaya during 30<sup>th</sup> March-01<sup>st</sup> April; and Nagaland, Manipur, Mizoram & Tripura on 01<sup>st</sup> April, 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.














**Agromet advisories for Heavy Rainfall, Gusty winds, Hailstorms and Heat Wave likely over various parts of the country:**

- 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 Himachal Pradesh, Uttarakhand, Punjab and Haryana.
- In Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab and Haryana, harvest the matured crops and vegetables at the earliest and keep the harvested produce at safer places or cover the heaps of harvested produce in the fields with tarpaulin sheets.
- Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Jammu & Kashmir, Himachal Pradesh and North Eastern States.
- Apply light and frequent irrigation to standing crops in Madhya Pradesh, Vidarbha and North Interior Karnataka.

## Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **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.

<b>SPATIAL DISTRIBUTION</b> (% 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)

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