



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 30<sup>th</sup> March, 2024

Time of Issue: 1330 hours IST

**Subject:**

- i. **Moderate to severe thunderstorm activity likely to continue over Northwest, central and east India today and reduce thereafter.**
- ii. **A fresh spell of intense rainfall/thunderstorm likely over Northeast India during 30<sup>th</sup> March to 01<sup>st</sup> April, 2024.**
- iii. **Heat wave/warm night conditions likely to prevail over central & peninsular India during next 3 to 5 days.**

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

- ❖ **Hailstorm** recorded at isolated places over Himachal Pradesh, Uttarakhand, Madhya Pradesh, Haryana, Chandigarh and West Uttar Pradesh.
- ❖ **Thunderstorms with Gusty winds** recorded at isolated places over Madhya Pradesh, Punjab and Haryana-Chandigarh-Delhi.
- ❖ **Warm night conditions** prevailed in isolated pockets over East Madhya Pradesh, Chhattisgarh, Madhya Maharashtra and Marathwada.
- ❖ **Heat wave conditions** prevailed in isolated pockets over Madhya Pradesh and West Rajasthan.

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

- ❖ A Western Disturbance seen as a cyclonic circulation over Afghanistan & neighbourhood with a trough aloft in middle & upper tropospheric westerlies roughly along Long. 65°E to the north of Lat. 30°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 30<sup>th</sup> and Uttarakhand during 30<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 30<sup>th</sup> March, 2024.
  - ✓ Isolated/Scattered light to moderate rainfall with **thunderstorms & lightning** and **hailstorm** very likely over Punjab, Haryana, Chandigarh, Delhi, Rajasthan and Uttar Pradesh on 30<sup>th</sup> March, 2024 and dry weather thereafter.
- ❖ A cyclonic circulation lies over north Chhattisgarh & neighbourhood and a trough/wind discontinuity runs from interior Tamil Nadu to the cyclonic circulation over Chhattisgarh in lower tropospheric levels. Another cyclonic circulation lies over Sub-Himalayan West Bengal & neighbourhood in lower tropospheric levels. Under the influence of these systems:
  - ✓ Scattered to widespread light to moderate rainfall/snowfall with isolated **thunderstorms & lightning** over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 30<sup>th</sup> March-05<sup>th</sup> April, 2024.
  - ✓ **Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during on 30<sup>th</sup> March to 01<sup>st</sup> April**

***and isolated very heavy falls over Arunachal Pradesh, Assam & Meghalaya on 31<sup>st</sup> March, 2024.***

- ✓ Isolated/scattered light to moderate rainfall with **thunderstorms, lightning & gusty winds** very likely over Odisha, Gangetic West Bengal, Jharkhand on 30<sup>th</sup> & 31<sup>st</sup> and Bihar on 30<sup>th</sup> March, 2024 and also with isolated **hailstorms** over east Bihar, Sub-Himalayan West Bengal & Sikkim and Odisha today.
- ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** very likely over West Madhya Pradesh on 30<sup>th</sup>; over East Madhya Pradesh, Madhya Maharashtra, Marathwada, Vidarbha & Chhattisgarh on 30<sup>th</sup> & 31<sup>st</sup> March, 2024 and also with isolated **hailstorms** over Vidarbha and Chhattisgarh today.

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

- ❖ Yesterday, Maximum temperatures were in the range of 40-43°C at many places over Vidarbha, Rayalaseema, East Madhya Pradesh; few places over Marathwada, Odisha and isolated places over West Madhya Pradesh, Madhya Maharashtra, Chhattisgarh, North Interior Karnataka, East Rajasthan and Gujarat Region. These were in the range of 36-40°C over rest parts of South-Central-West India, Odisha, Rajasthan and at many places over south Haryana-Delhi, south Uttar Pradesh, Jharkhand and Gangetic West Bengal. These were in the range of 30-35°C over rest parts of the plains of the country.
- ❖ Yesterday, maximum temperatures were above 95<sup>th</sup> percentile in isolated pockets of Madhya Pradesh, interior Maharashtra, interior Karnataka, west Telangana and Rayalaseema.
- ❖ Today, minimum temperatures are **above normal by 3-5°C** at most places over Uttar Pradesh, Bihar, Madhya Maharashtra, East Madhya Pradesh; at many places over East Rajasthan, Haryana-Chandigarh-Delhi, West Madhya Pradesh, Marathwada; at a few places over Konkan & Goa, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, West Rajasthan; at isolated places over Uttarakhand, Odisha, Vidarbha.
- ❖ Fall in maximum temperatures by 2-4°C very likely over many parts of Northwest India during next 3 days and rise by 2-3°C thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over many parts of Central & East India during next 2-3 days and no significant change thereafter.
- ❖ Rise in maximum temperatures by 2-3°C very likely over many parts of south peninsular India during next 5 days.
- ❖ No significant change in maximum temperatures very likely over Maharashtra during next 24 hours and rise by 2-3°C thereafter.

#### **Heat wave, Warm Night and Hot & Humid weather warning for next 5 days:**

- ❖ **Heat wave conditions** very likely in isolated pockets over Madhya Pradesh, Vidarbha during 30<sup>th</sup> March-01<sup>st</sup> April; North Interior Karnataka on 30<sup>th</sup> & 31<sup>st</sup> March; Telangana during 31<sup>st</sup> March-03<sup>rd</sup> April and Rayalaseema during 01<sup>st</sup>-03<sup>rd</sup> April, 2024.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over Madhya Pradesh, Vidarbha, Chhattisgarh, Madhya Maharashtra and Marathwada during 30<sup>th</sup> March-01<sup>st</sup> April.
- ❖ **Hot and humid weather** very likely to prevail over Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 30<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.

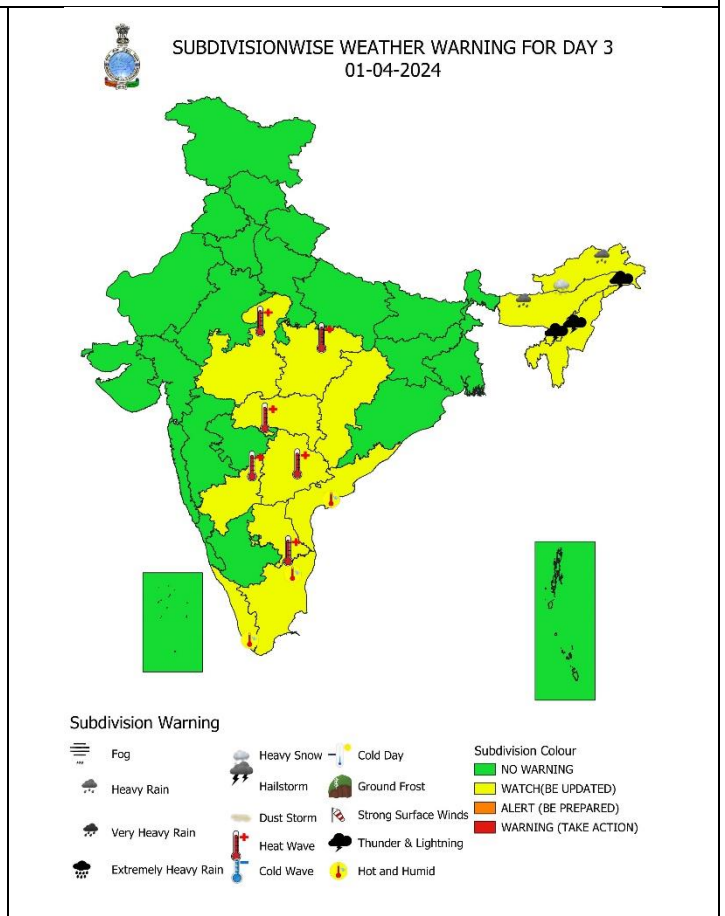
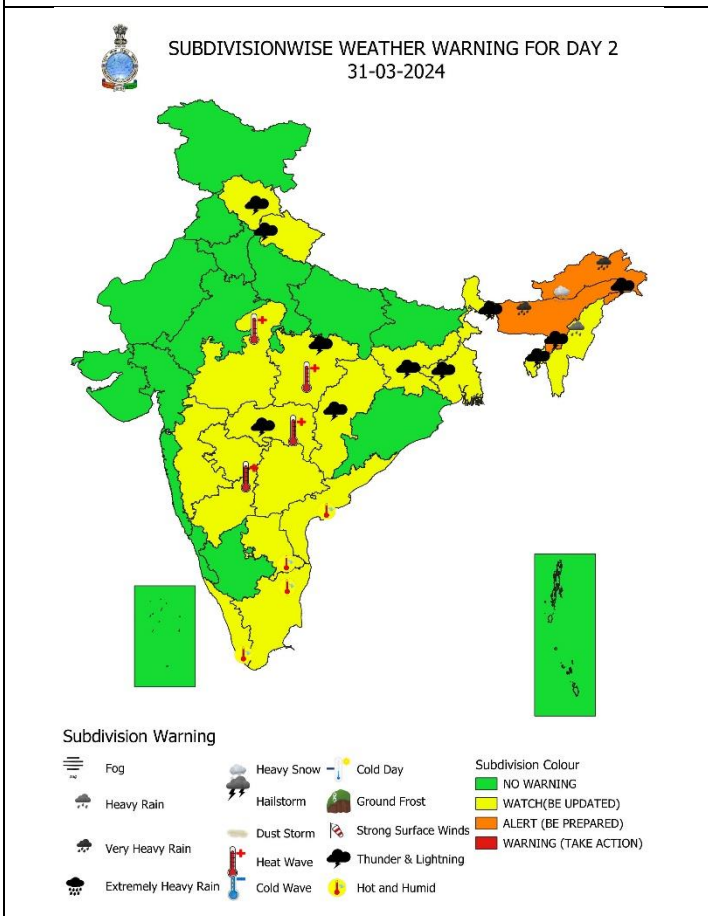
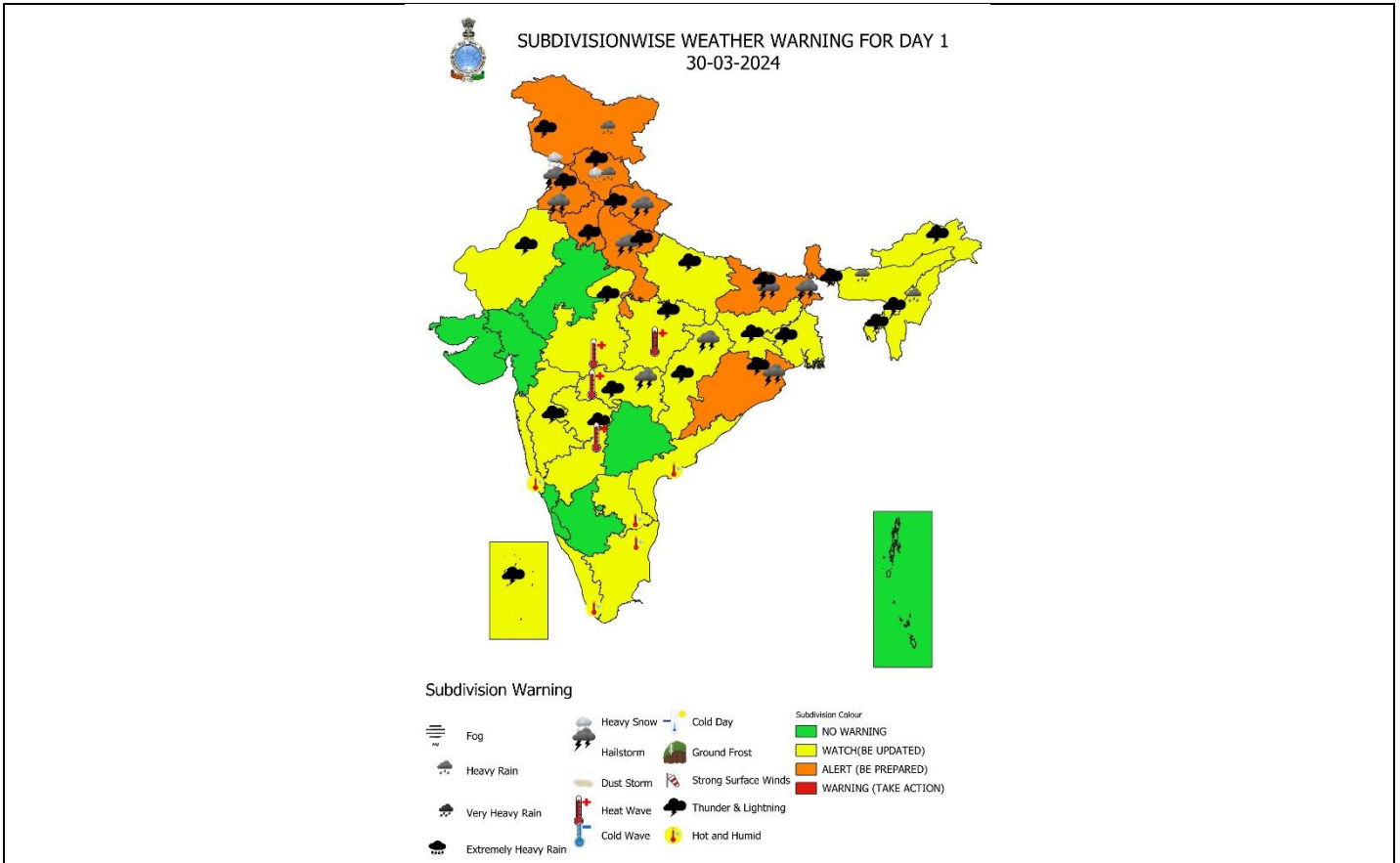
**For more details, kindly refer:** [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**Realised weather recorded during past 24 hours:**

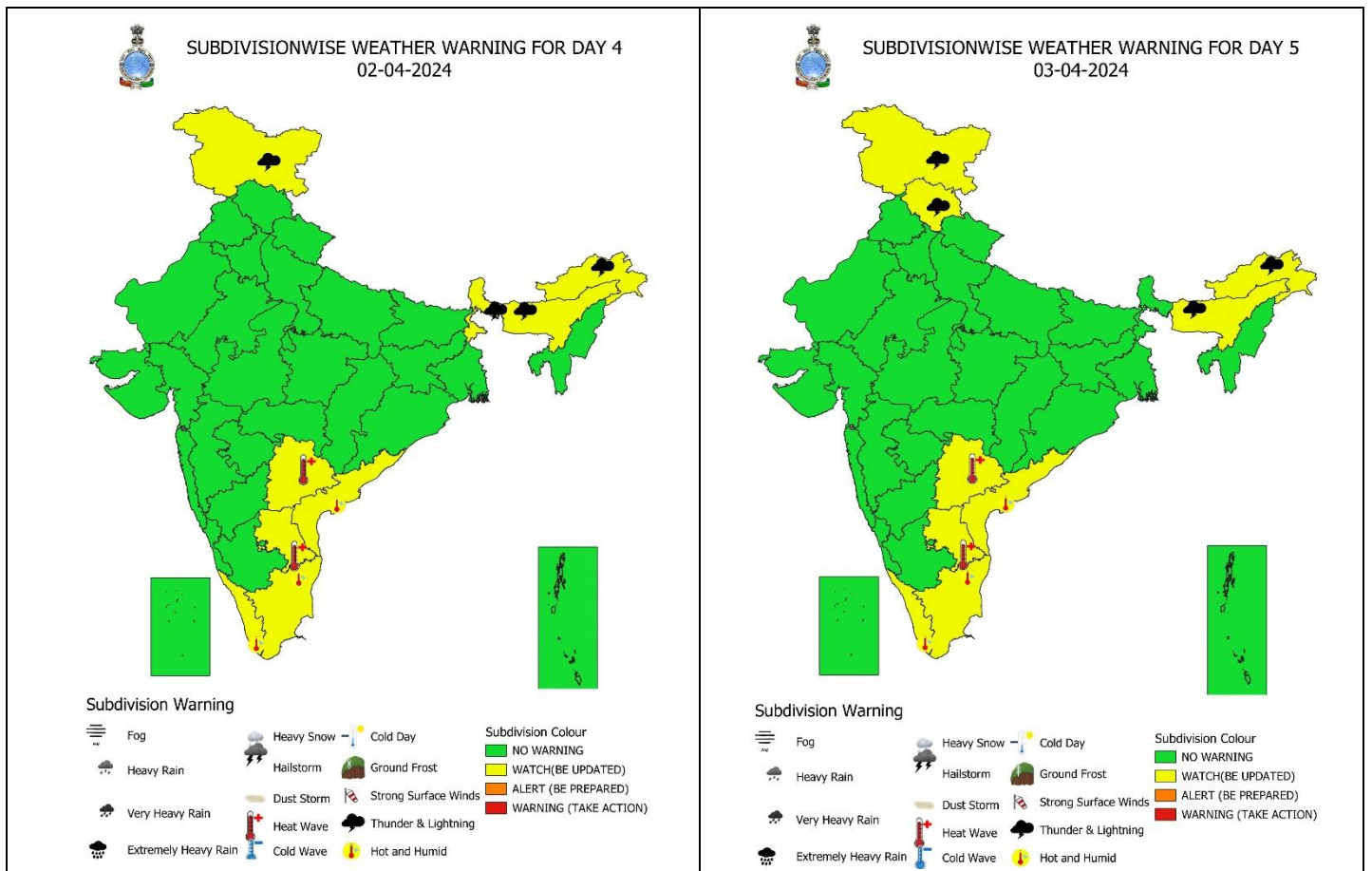
- ❖ **Light/Moderate rainfall/snowfall** accompanied with thunderstorm recorded at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and at a few places over Arunachal Pradesh, Uttarakhand.
- ❖ **Light/Moderate rainfall** accompanied with thunderstorm recorded at most places over Punjab; at many places over Nagaland, Manipur, Mizoram & Tripura; at a few places over Haryana-Chandigarh-Delhi, Lakshadweep; at isolated places over West Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Konkan & Goa, Madhya Maharashtra, Marathwada, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.

**Significant amount of rainfall (in cm):**

- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Nowgam (dist Kupwara) 5, Banihal (dist Ramban) 4, Katra (dist Reasi) 4, Pahalgam (dist Anantnag) 3, R M Bagh Arg (dist Srinagar) 3, Batkoot Arg (dist Anantnag) 3, Asham Arg (dist Bandipore) 3, Rambagh Aws (dist Srinagar) 3, Kukernag (dist Anantnag) 3, Srinagar (dist Srinagar) 3, Batote (dist Ramban) 3, Pahalgam Aws (dist Anantnag) 3, Kupwara Kvk Aws (dist Kupwara) 3, Govindpura Aws (dist Ramban) 3, Gulmarg R.s. (dist Baramula) 3, Srinagar Agro Aws (dist Srinagar) 3, Srinagar Aero (dist Badgam) 3, Larnoo Arg (dist Anantnag) 3,
- ❖ **Himachal Pradesh:** Bilaspur Sadar (dist Bilaspur) 5, Kahu (dist Bilaspur) 5, Bijahi (dist Mandi) 5, Aghar (dist Hamirpur) 4, Manali (dist Kullu) 3, Seo Bagh (dist Kullu) 3, Chuari (dist Chamba) 3, Gohar (dist Mandi) 3, Dalhousi Alha Aws (dist Chamba) 3, Paonta (dist Sirmaur) 3, Bilaspur Aws (dist Bilaspur) 3, Una (dist Una) 3, Saloni (dist Chamba) 3, Dharmshala (dist Kangra) 3, Bhuntar Aero (dist Kullu) 3, Naina Davi (dist Bilaspur) 3, Banjar (dist Kullu) 3, Una Rampur Aws (dist Una) 3, Dharmshala Aws (dist Kangra) 3, Sundarnagar (dist Mandi) 3, Bharari (dist Hamirpur) 2, Sarahan (dist Shimla) 2, Chamba Aws (dist Chamba) 2, R L Bbmb (dist Bilaspur) 2, Baldwara (dist Mandi) 2, Hamirpur (dist Hamirpur) 2, Hmo Kasol (dist Kullu) 2, Pandoh (dist Mandi) 2, Jogindarnagar (dist Mandi) 2, Mandi (dist Mandi) 2, Bhoranj (dist Hamirpur) 2, Hmo Shillaro (dist Shimla) 2, Tissa (dist Chamba) 2, Simla (dist Shimla) 2
- ❖ **Assam & Meghalaya:** Matijuri (dist Hailakandi) 5, Amraghat (dist Cachar) 2, Dudhnoi Arg (dist Goalpara) 2, Dholai (dist Cachar) 2, A P Ghat (dist Cachar) 2,
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Agartala Aero (dist West Tripura) 3, Lembuchhera (dist West Tripura) 3, Mokokchang (dist Mokokchung) 3, Arundhutinagar (dist West Tripura) 3, Mangkolemba (dist Mokokchung) 2, Mokokchung\_ Aws (dist Mokokchung) 2, Bishalgarh (dist Sipahijala) 2,
- ❖ **Haryana:** Sadhaura (dist Yamuna Nagar) 3, Dadupur (dist Yamuna Nagar) 3, Naraingarh (dist Ambala) 3;
- ❖ **Punjab:** Phangota (dist Pathankot) 3, Shahpur Kandi (dist Pathankot) 3, Malikpur (dist Pathankot) 2, Madhopur (dist Pathankot) 2, Jagraon (dist Ludhiana) 2, Anandpur Sahib (dist Rupnagar) 2,
- ❖ **Uttarakhand:** Dehradun-2







**Impact expected and action suggested due to thunderstorm with lightning/gusty winds & Hailstorm over Himachal Pradesh, Uttarakhand, Punjab, Haryana & Chandigarh, West Uttar Pradesh, east Bihar, Sub-Himalayan West Bengal & Sikkim, Vidarbha, Chhattisgarh and Odisha on 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 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/very heavy rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh on 30<sup>th</sup> March; Arunachal Pradesh on 31<sup>st</sup> March & 01<sup>st</sup> April; Assam & Meghalaya during 30<sup>th</sup> March-01<sup>st</sup> April; and Nagaland, Manipur, Mizoram & Tripura on 30<sup>th</sup> & 31<sup>st</sup> March, 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 Sub- Himalayan West Bengal & Sikkim, Odisha, Bihar, Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, Vidarbha and Chhattisgarh.
- ✓ In Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh and Vidarbha, 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