



**Government of India  
Ministry of Earth Sciences  
India Meteorological Department**

**Press Release  
Date: 31<sup>st</sup> March, 2023  
Time of Issue: 1315 hours IST**

**Subject: Rainfall with thunderstorm/hailstorm over Northwest & East India on today, the 31<sup>st</sup> March and significant reduction thereafter.**

**Weather observed during past 24 hours ending at 0830 hrs IST of today: Refer Annexure I**

**Weather Forecast and Warnings (Graphics in Annexure II):**

- ❖ A **Western Disturbance** as a cyclonic circulation lies over north Pakistan in lower & mid-tropospheric levels. A cyclonic circulation lies over northwest Rajasthan in lower tropospheric levels.
- ❖ A fresh Western Disturbance very likely to affect northwest India from night of 2<sup>nd</sup> April.
- ❖ A wind discontinuity runs from central parts of Uttar Pradesh to Telangana in lower tropospheric levels.
- ❖ The other trough from Sub-Himalayan West Bengal to north Odisha in lower tropospheric levels.
- ❖ A cyclonic circulation lies over south Assam & neighbourhood in lower tropospheric levels
- ❖ **Under the influence of above synoptic features, following weather is expected:**

**Northwest India:**

- Fairly widespread to widespread **rainfall/thunderstorm, lightning/gusty winds along with isolated hailstorm** very likely over **Northwest India** on today, the 31<sup>st</sup> March and significant reduction thereafter till 02<sup>nd</sup> April.
- Isolated **heavy rainfall** very likely over Western Himalayan Region on 31<sup>st</sup> March.
- A fresh spell of scattered to fairly widespread rainfall/**thunderstorm, lightning very likely over the region on 03<sup>rd</sup> April**. Isolated **hailstorm** likely over Himachal Pradesh, Uttarakhand, Punjab and Haryana on 03<sup>rd</sup> April, 2023

**East India:**

- Scattered to fairly widespread rainfall/thunderstorm, lightning/gusty winds very likely over the region on 31<sup>st</sup> March & 01<sup>st</sup> April.
- Isolated **hailstorm** likely over Bihar, Jharkhand, West Bengal & Sikkim and Odisha on today, the 31<sup>st</sup> March.
- Isolated **heavy rainfall** also likely over West Bengal & Sikkim and north Odisha on today, the 31<sup>st</sup> March.

**Northeast India:**

- Fairly widespread to widespread light/moderate rainfall/thunderstorm, lightning, gusty winds very likely to continue over Northeast India during 31<sup>st</sup> March-04<sup>th</sup> April.
- Isolated **heavy rainfall** likely over Assam & Meghalaya during 31<sup>st</sup> March- 02<sup>nd</sup> April; over Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura on 01<sup>st</sup> & 02<sup>nd</sup> April.
- Isolated hailstorm likely over Assam & Meghalaya on 31<sup>st</sup> March & 01<sup>st</sup> April.

**Central India:** Isolated **rainfall/thunderstorm, lightning/gusty winds** very likely over the region on 31<sup>st</sup> March. Isolated **hailstorm** also likely over East Madhya Pradesh and Chhattisgarh on today, the 31<sup>st</sup> March.

**South & West India:** No significant weather is expected over the region during next 5 days.

**Maximum Temperatures Forecast during next 5 days:**

- ❖ Maximum temperatures are below normal by 2-4°C over most parts of the country. It is likely to be below normal to near normal during next 5 days.
- ❖ **No heat wave likely over any part of country during next 5 days.**

**Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm on and over**

- **31<sup>st</sup> March:** Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, Delhi, West Uttar Pradesh, East Rajasthan, Bihar, Jharkhand, Odisha, West Bengal & Sikkim, Assam & Meghalaya.
- **01<sup>st</sup> April:** Uttarakhand, Assam & Meghalaya
- **03<sup>rd</sup> April:** Himachal Pradesh, Uttarakhand, Punjab, Haryana

**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.

**Advisory for farmers:**

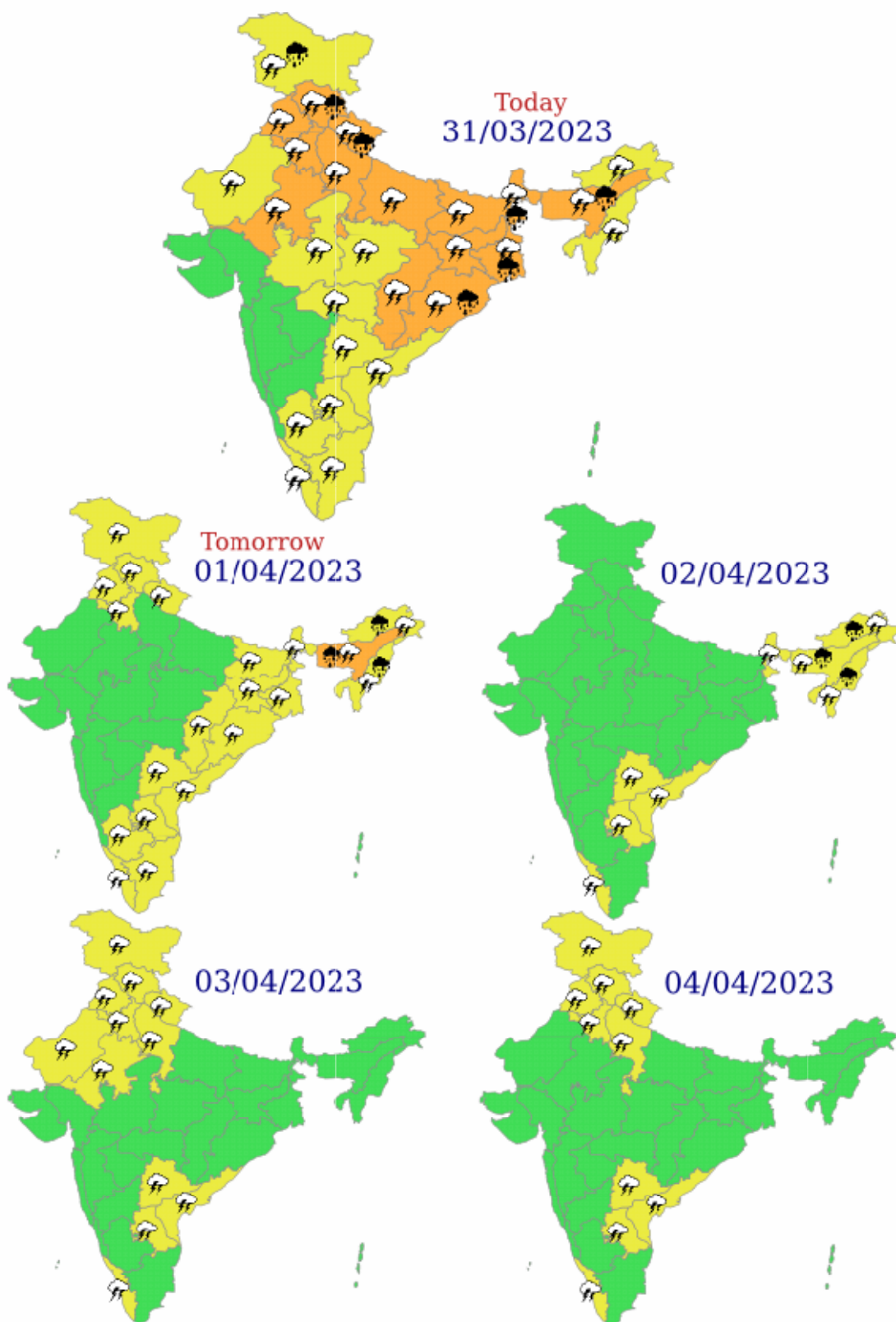
- Postpone harvesting of matured crops in Arunachal Pradesh, Punjab and Haryana; keep already harvested produce in a safe place or cover the heaps of already harvested produce in the field with tarpaulin sheets.
- Complete the harvesting of matured crops in Jammu, Uttar Pradesh, Uttarakhand and Rajasthan during clear weather; keep the harvest at safe place or cover the harvested produce in the fields.
- Postpone sowing of maize in Arunachal Pradesh.
- Make arrangements to drain out excess water from crop fields.
- Provide mechanical support to horticultural crops and staking to vegetables.
- Use hail nets to protect orchards.

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)

<https://mausam.imd.gov.in/responsive/districtWiseNowcast.php>

- ❖ **Light/moderate rainfall/thundershowers** observed at most places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Haryana, Chandigarh & Delhi, West Uttar Pradesh and Gangetic West Bengal; at many places over Himachal Pradesh, Uttarakhand, Punjab, East Uttar Pradesh and East Rajasthan; at a few places over West Rajasthan, East Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha and Nagaland, Manipur, Mizoram & Tripura and at isolated places over West Madhya Pradesh, Vidarbha, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Gujarat state, Konkan & Goa, Telangana, Rayalaseema, South Interior Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy rainfall** occurred at isolated over Gangetic West Bengal and Odisha.
- ❖ **Thunderstorm** observed at isolated places over Jammu & Kashmir, Uttarakhand, Punjab, Haryana & Delhi, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha, Tripura and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Hailstorm** observed at isolated places over Uttarakhand, Delhi and Rajasthan.
- ❖ **Significant amount of rainfall (in cm):**
  - **Odisha:** Danagadi (dist Jajpur) 7;
  - **Gangetic West Bengal:** West Midnapore-7, Murshiadabad-4
  - **Kerala:** Palakkad-5.
  - **Gujarat Region:** Banaskantha-3,
  - **Jammu:** Jammu, Katra-2 each
  - **Uttarakhand:** Mussoorie, Narendranagar-3 each
  - **Himachal Pradesh:** Sirmaur-3
  - **West Uttar Pradesh:** baghpat-2
  - **Haryana:** Palwal, Panchkula, Jhajjar-3 each
  - **Punjab:** Patiala-2



## Legends:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **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-Himalaya 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, Tamilnadu, 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)

### WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

### Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State