



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 19<sup>th</sup> March, 2024

Time of Issue: 1245 hours IST

**Subject: (i) Light to moderate rainfall accompanied with thunderstorm, lightning & hail likely to continue over East and Central India on 19<sup>th</sup> & 20<sup>th</sup> March, 2024.**  
**(ii) Enhance rainfall with thunderstorm activity over northeast India and Sub-Himalayan West Bengal & Sikkim during 20<sup>th</sup> to 23<sup>rd</sup> March, 2024.**

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

- ❖ **Light rainfall/snowfall** observed at isolated places over Arunachal Pradesh, Himachal Pradesh and Uttarakhand.
- ❖ **Light/moderate rainfall** observed at many places over Chhattisgarh; at a few places over East Madhya Pradesh, Gangetic West Bengal, Jharkhand, Odisha; at isolated places over West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Vidarbha, Coastal Andhra Pradesh & Yanam, Kerala & Mahe, North Interior Karnataka and Telangana.
- ❖ **Heavy rainfall** occurred at isolated places over East Madhya Pradesh.
- ❖ **Hailstorm** observed at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh and Telangana.
- ❖ **Thundersquall/gusty winds** observed at isolated places over Jharkhand, Telangana, Madhya Pradesh, Vidarbha and Chhattisgarh.

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

- ❖ A cyclonic circulation lies over west Vidarbha and a trough/wind discontinuity runs from South Interior Karnataka to west Vidarbha & another trough from Jharkhand to south Assam in lower tropospheric levels. The anti-cyclonic circulation lies over Westcentral & adjoining Northwest Bay of Bengal off Odisha coast in lower tropospheric levels. Under the influence of these systems:
  - ✓ Scattered to fairly widespread light to moderate rainfall with isolated **thunderstorms, lightning & gusty winds** very likely over **Gangetic West Bengal, Jharkhand and Odisha** during 19<sup>th</sup>–21<sup>st</sup> with possibility of **hailstorm & squall (speed reaching 50-60 kmph)** on 19<sup>th</sup> March, 2024.
  - ✓ Scattered to fairly widespread light to moderate rainfall with **thunderstorms, lightning & gusty winds** over Vidarbha, Chhattisgarh, Bihar and isolated light to moderate rainfall over East Madhya Pradesh on 19<sup>th</sup> & 20<sup>th</sup> March, 2024. **Isolated hailstorm also very likely over Vidarbha, East Madhya Pradesh & Chhattisgarh on 19<sup>th</sup> March, 2024. Thundersquall (speed reaching 50-60 kmph)** likely over East Madhya Pradesh and Vidarbha on 19<sup>th</sup> March, 2024.
  - ✓ Isolated **heavy rainfall** very likely over Odisha on 19<sup>th</sup> & 20<sup>th</sup> and Chhattisgarh, Gangetic West Bengal & Jharkhand on 19<sup>th</sup> March, 2024.

- ✓ Scattered to fairly widespread light/moderate rainfall with isolated thunderstorms & lightning very likely over Telangana and Coastal Andhra Pradesh & Yanam on 19<sup>th</sup> & 20<sup>th</sup> March, 2024. Isolated **heavy rainfall** also likely over Coastal Andhra Pradesh on 20<sup>th</sup> March, 2024.
- ✓ Isolated light rainfall with thunderstorm & lightning very likely over Marathwada with possibility of **hailstorm** on 19<sup>th</sup> March.
- ✓ Scattered to fairly widespread light/moderate rainfall with isolated thunderstorms & lightning very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 19<sup>th</sup>-25<sup>th</sup> March, 2024.
- ✓ Isolated **heavy rainfall/snowfall** very likely over Arunachal Pradesh on 20<sup>th</sup> & 23<sup>rd</sup> and over Sikkim on 23<sup>rd</sup> and isolated **heavy rainfall** over Assam & Meghalaya on 23<sup>rd</sup> March, 2024.
- ❖ Two fresh Western Disturbances are likely to affect Western Himalayan Region, one from the night of 20<sup>th</sup> and another from the night of 23<sup>rd</sup> March, 2024. Under their influence; isolated/scattered light rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 20<sup>th</sup>-24<sup>th</sup> and over Himachal Pradesh & Uttarakhand on 19<sup>th</sup> & again during 21<sup>st</sup>-24<sup>th</sup> March, 2024.

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

- ❖ **Maximum temperatures** are below normal by 2-3°C over many parts of the country except over some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab and Northeast India, south peninsular India & Saurashtra & Kutch, where these are near normal.
- ❖ Gradual rise in maximum temperatures by 2-4°C very likely over Northwest & West India during next 4-5 days.
- ❖ Fall in maximum temperatures by 2-3°C very likely over East India during next 2 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over Central India during next 2 days and rise by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during next 5 days.
- ❖ **Hot and humid weather** very likely to prevail over coastal districts of Saurashtra & Kutch during next 5 days; over Kerala & Mahe, Rayalaseema and Tamil Nadu, Puducherry & Karaikal during next 3 days.

#### **Heat wave warning:**

- ❖ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch during 19<sup>th</sup>-23<sup>rd</sup> March.

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)

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

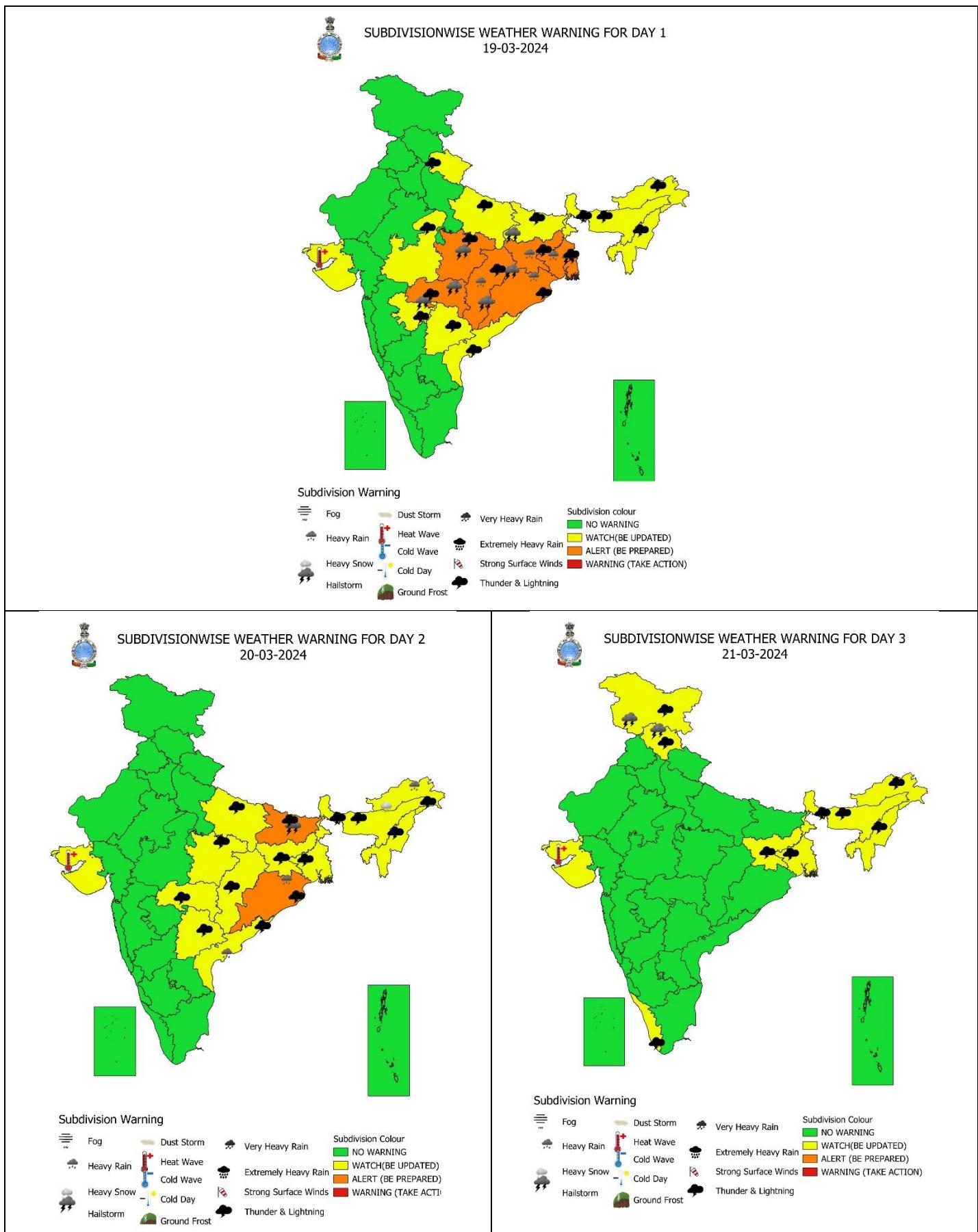
**East Madhya Pradesh:** Tirodi (dist Balaghat) 7, Katangi (dist Balaghat) 6, Barghat (dist Seoni) 4, Pushprajgarh (dist Anuppur) 4, Nainpur (dist Mandla) 3, Waraseoni (dist Balaghat) 3, Venkatnagar (dist Anuppur) 3, Anuppur-aws (dist Anuppur) 3, Kotma (dist Anuppur) 3, Jaithari (dist Anuppur) 3, Balaghat-aws (dist Balaghat) 3, Dhanora (dist Seoni) 3, Lalburra (dist Balaghat) 2, Channodi (dist Shahdol) 2, Amarwara (dist Chhindwara) 2, Bajhar (dist Balaghat) 2, Lakhnadon (dist Seoni) 2, Jaitpur (dist Shahdol) 2, Bijuri (dist Anuppur) 2,

**Chhattisgarh:** Akaltara (dist Janjgir) 5, Bhatapara (dist Baloda Bazar) 5, Dhamdha (dist Durg) 4, Masturi (dist Bilaspur) 4, Gandai (dist Rajnandgaon) 4, Sonhat (dist Koriya) 4, Kawardha (dist Kabirdham) 4, Bilha (dist Bilaspur) 3, Pamgarh (dist Janjgir) 3, Saja (dist Bemetara) 3, Janjgir (dist Janjgir) 3, Chhuikhadan (dist Rajnandgaon) 3, Bilaigarh (dist Baloda Bazar) 3, Bilaspur (dist Bilaspur) 3, Sahaspurlohara (dist Kabirdham) 3, Nawagarh (dist Bemetara) 3, Marwahi (dist Bilaspur) 3, Bhaiyathan (dist Surajpur) 2, Simga

**Jharkhand:** Ramgarh-4; Dumka, Hazaribag-3 each; Gumla, Lohardaga, Ranchi-2 each;

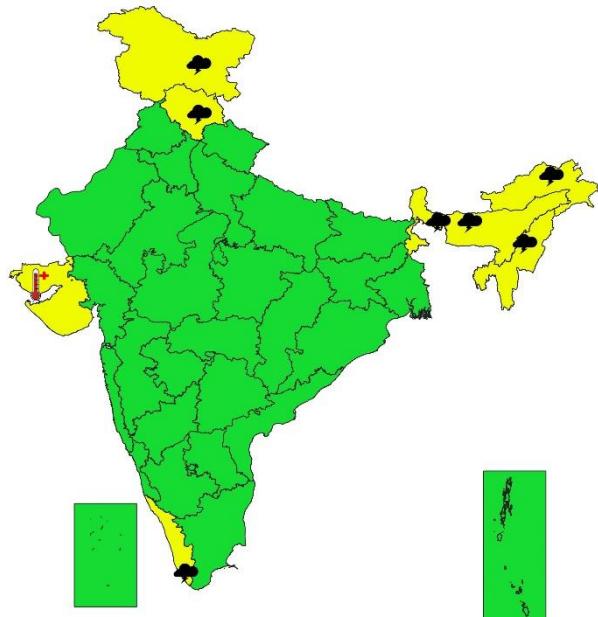
**Gangetic West Bengal:** East Midnapore-3, Purulia-1

**Odisha:** Jajpur-6, Dhenkanal-5, Balasore, Sambalpur, Bargarh, Gajpati, Jagatsinghpur-3 each, Jharsuguda, Kendrapara, Angul, Bhadrak, Sundargarh-2 each,





SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
22-03-2024

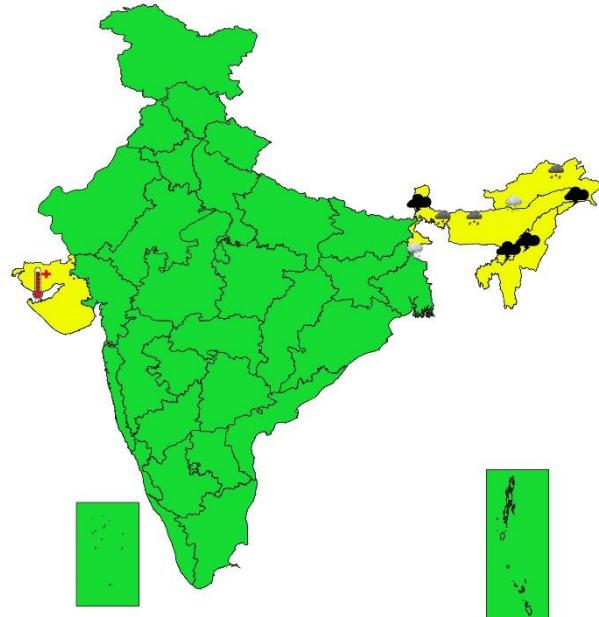


Subdivision Warning

	Fog		Dust Storm		Very Heavy Rain
	Heavy Rain		Heat Wave		Extremely Heavy Rain
	Heavy Snow		Cold Wave		Strong Surface Winds
	Hailstorm		Cold Day		Thunder & Lightning
	Ground Frost				



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
23-03-2024



Subdivision Warning

	Fog		Dust Storm		Very Heavy Rain
	Heavy Rain		Heat Wave		Extremely Heavy Rain
	Heavy Snow		Cold Wave		Strong Surface Winds
	Hailstorm		Cold Day		Thunder & Lightning
	Ground Frost				

**Impact expected and action suggested due to thunderstorm with lightning, gusty winds & Hailstorm:** over East Madhya Pradesh, Vidarbha, Chhattisgarh, Marathwada, Gangetic West Bengal, Jharkhand & Odisha on 19<sup>th</sup> march and Bihar on 20<sup>th</sup> March.

**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 Heavy Rainfall, Gusty winds and Hailstorms 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 Marathwada, East Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Jharkhand, Bihar and Telangana.
- Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Chhattisgarh, Odisha, Jharkhand and Gangetic West Bengal and keep the harvested produce at safer places or cover the heaps of harvested produce in the fields with tarpaulin sheets.
- Provide mechanical support to horticultural crops and staking to vegetables in Central and East India.

## 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.

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 Widespred (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