



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 20th March, 2024

Time of Issue: 1300 hours IST

Subject: (i) Light to moderate rainfall accompanied with thunderstorm, lightning & hail likely to continue over East India today, the 20th March and gradually decrease thereafter.

(ii) Enhance rainfall with thunderstorm activity over Northeast India and Sub-Himalayan West Bengal & Sikkim during 20th to 23rd March, 2024.

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

- ❖ **Light to moderate rainfall/snowfall** observed at isolated places over Arunachal Pradesh, Himachal Pradesh and Uttarakhand.
- ❖ **Light to moderate rainfall** observed at most places over Chhattisgarh, Odisha, West Bengal & Sikkim; at many places over Bihar, Jharkhand; at a few places over Vidarbha, Coastal Andhra Pradesh, Assam & Meghalaya; at isolated places over East Uttar Pradesh, Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe and Telangana.
- ❖ **Very heavy rainfall** occurred at isolated places over Coastal Andhra Pradesh and **heavy rainfall** at isolated places over Odisha and Telangana.
- ❖ **Hailstorm** observed at isolated places over Himachal Pradesh, East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh and Telangana.
- ❖ **Thundersquall/gusty winds** observed at isolated places over Bihar, Jharkhand, Telangana, Madhya Pradesh, Vidarbha and Chhattisgarh.

Weather Systems and Forecast & Warnings: (Annexure II)

- ❖ A cyclonic circulation lies over north Telangana and a trough/wind discontinuity runs from Kerala to north Telangana & another trough from northeast Madhya Pradesh to south Assam in lower tropospheric levels. A cyclonic circulation lies over Jharkhand & neighbourhood in lower tropospheric level with trough aloft from northeast Uttar Pradesh to east Vidarbha in middle & upper tropospheric level. The anti-cyclonic circulation lies over 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, Bihar** on 20th & 21st and over **Jharkhand and Odisha on 20th March and gradual reduction thereafter. Isolated hailstorm** also very likely over Bihar, East Uttar Pradesh and Jharkhand on 20th March.
 - ✓ Isolated **heavy rainfall** very likely over Bihar and Odisha on 20th March, 2024.
 - ✓ Isolated light to moderate rainfall with **thunderstorms, lightning & gusty winds** over East Madhya Pradesh, Vidarbha, Chhattisgarh on 20th March, 2024.
 - ✓ Isolated to scattered light/moderate rainfall with isolated thunderstorms & lightning very likely over Telangana and Coastal Andhra Pradesh & Yanam on 20th & 21st March, 2024.

- ✓ Fairly widespread to 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 20th-26th March, 2024.
- ✓ Isolated **heavy rainfall/snowfall** very likely over Arunachal Pradesh during 20th, 21st & 23rd; over Sikkim on 20th & 23rd and isolated **heavy rainfall** over Assam & Meghalaya on 21st March, 2024.
- ❖ A fresh Western Disturbance seen as a trough in middle tropospheric westerlies roughly along Long. 50°E to the north of Lat. 30°N. Another fresh Western Disturbance is likely to affect Western Himalayan Region from the night of 23rd March, 2024. Under their influence:
 - ✓ Isolated/scattered light rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh & Uttarakhand during 21st-24th March, 2024. Isolated light rainfall likely over Punjab on 21st, 22nd & 24th and over Haryana and West Uttar Pradesh on 24th March, 2024.
 - ✓ **Isolated hailstorm** also very likely over Jammu-Kashmir-Ladakh and Himachal Pradesh on 21st March.
 - ✓ **Strong surface winds (25-35 kmph)** very likely to prevail over Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh on 21st March, 2024.

Maximum temperature forecast for next 5 days:

- ❖ **Maximum temperatures** are below normal by 7-9°C over many parts of Odisha, Chhattisgarh; by 2-4°C over East Madhya Pradesh, east Vidarbha, Telangana, Jharkhand, Gangetic West Bengal. These are above normal by 2-4°C over some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, north Punjab and Northeast India, south peninsular India, southwest Rajasthan & Saurashtra & Kutch and near normal over rest parts of the country.
- ❖ Gradual rise in maximum temperatures by 2-4°C very likely over Maharashtra during next 4-5 days.
- ❖ No significant change in maximum temperatures very likely over East India during next 3 days and rise by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over Northwest & Central India during next 24 hours 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 Rayalaseema during next 5 days; over Konkan & Goa, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal during next 2 days.

Heat wave warning:

- ❖ **Heat wave conditions** very likely in isolated pockets over Saurashtra & Kutch on 20th & 21st and over southwest Rajasthan on 23rd & 24th March.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

Significant rainfall amount (in cm):

Coastal Andhra Pradesh: Cheepurupalle (dist Vizianagaram) 14, Garividi (dist Vizianagaram) 13

Telangana: Kumar Bheem-8, Adilabad-2

Odisha: Angul, Bolangir, Boudhgarh, Cuttack, Dhenkanal-7 each, Khurda-6, Bargarh, Bhadrak, Jajpur, Kalahandi, Keonjhar-5 each, Balasore, Deogarh, Ganjam-4 each, Gajapati, Jharsuguda-3 each, Jagatsinghpur, Kendrapara -2 each

Bihar: Madhepura-6, Jahanbad, Kishanganj, Bhojpur-4 each, Purnea-3, Araria, Banka, Arwal, Supaul, Gaya, Saharsa-2

East Madhya Pradesh: Benibari (dist Anuppur) 4, Pushprajgarh (dist Anuppur) 3, Chhapara (dist Seoni) 3, Amarkantak (dist Anuppur) 3, Mawai (dist Mandla) 2, Karanjia (dist Dindori) 2, Bajag (dist Dindori) 2,

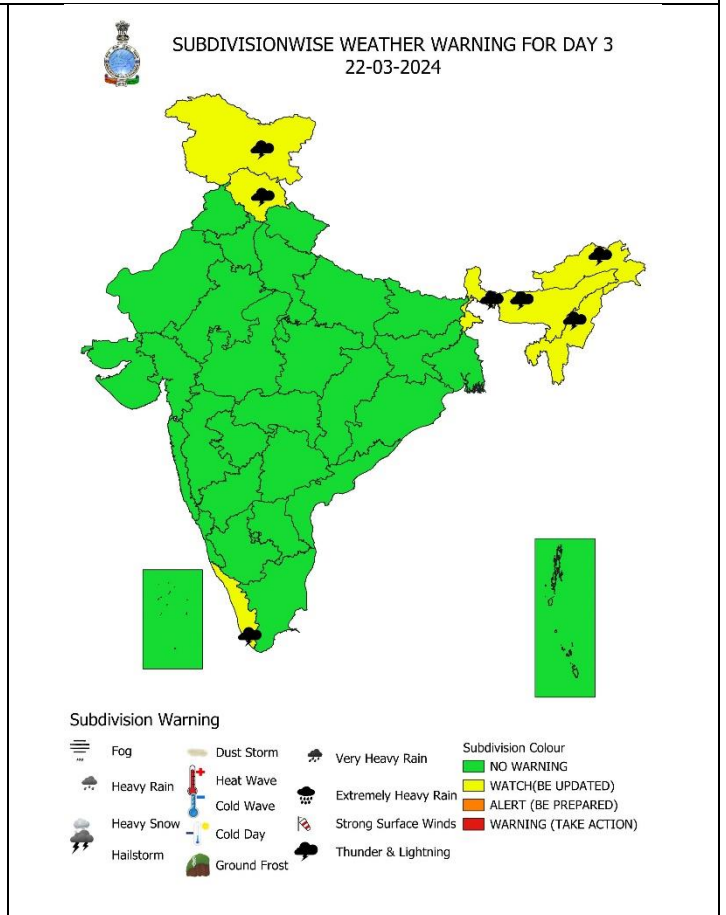
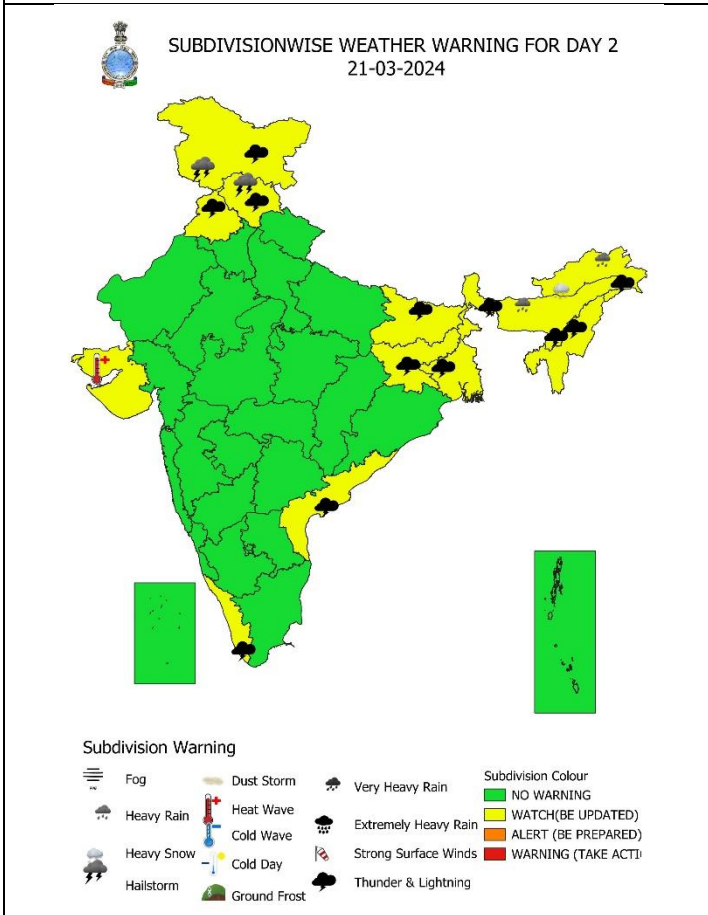
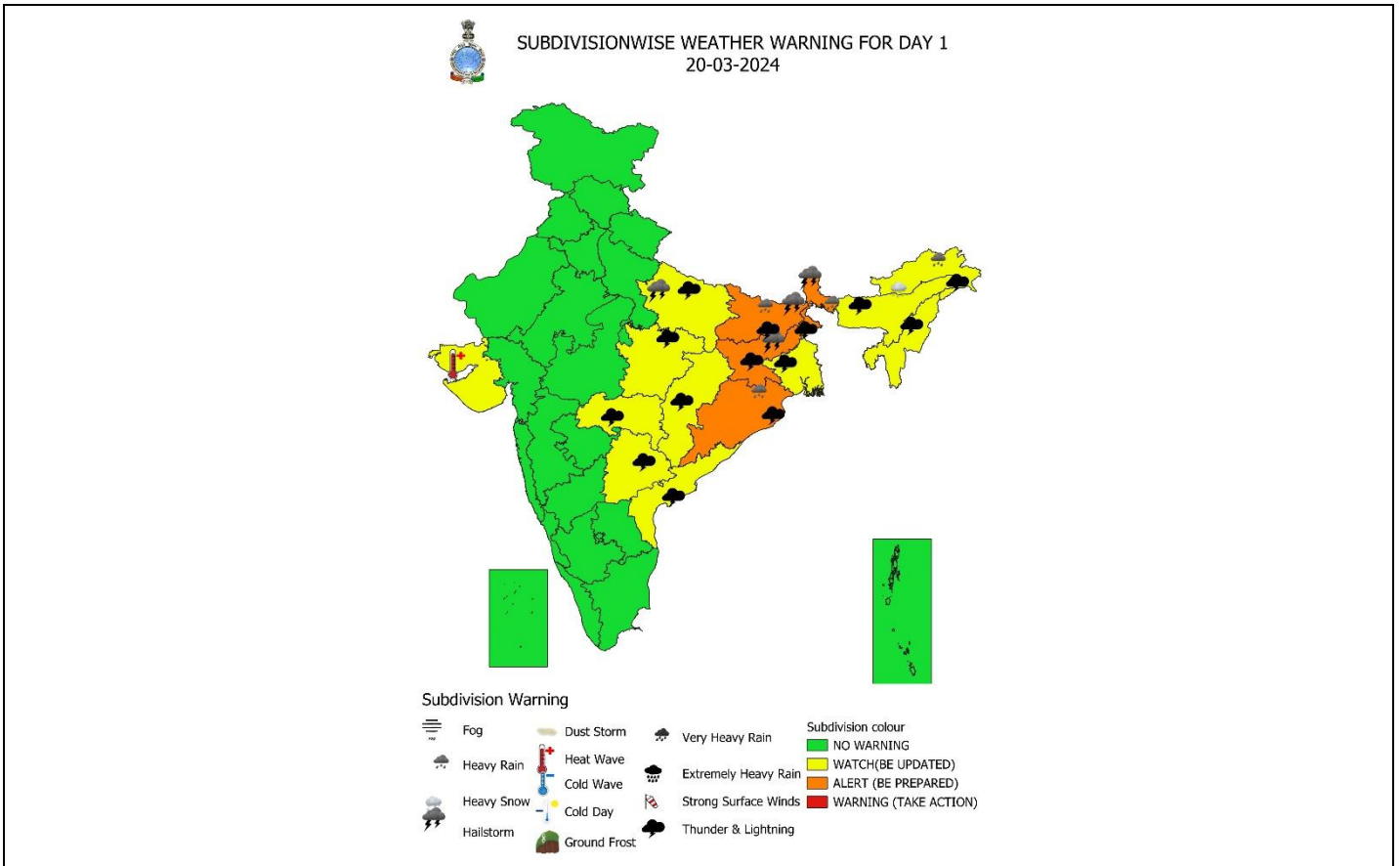
Chhattisgarh: Narayanpur (dist Narayanpur) 4, Janjgir (dist Janjgir) 4, Bhairamgarh (dist Bijapur) 4, Katghora (dist Korba) 3, Poudi Uparora (dist Korba) 3, Dhamtari (dist Dhamtari) 3, Akaltara (dist Janjgir) 3, Gundardehi (dist Balod) 3, Manpur (dist Rajnandgaon) 3, Chhuikhadan (dist Rajnandgaon) 3, Gurur (dist Balod) 3, Bijapur (dist Bijapur) 3, Patharia (dist Mungeli) 3, Champa (dist Janjgir) 3, Baloda (dist Janjgir) 3, Mungeli (dist Mungeli) 3, Kharsiya (dist Raigarh) 3, Patan (dist Durg) 3, Bhatapara (dist Baloda Bazar) 3, Nagari (dist Dhamtari) 3, Pamgarh (dist Janjgir) 3, Gidam (dist Dantewada) 3, Kartala (dist Korba) 3, Simga (dist Baloda Bazar) 3, Tamnar (dist Raigarh) 3, Nawagarh (dist Bemetara) 3,

Jharkhand: West Singbhum-3, Suimdega-2

Gangetic West Bengal: West Midnapore, Bankura-3 each, North & South 24 Parganas, Purulia, Hooghly, Nadia-2 each

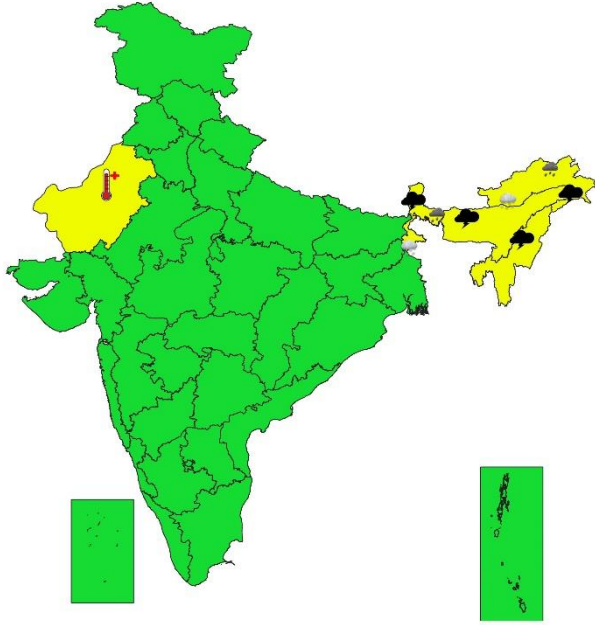
Vidarbha: Kuhi (dist Nagpur) 3, Mul (dist Chandrapur) 2, Saoli (dist Chandrapur) 2, Korpana (dist Chandrapur) 2,

Assam & Meghalaya: Williamnagar (dist East Garo Hills) 2, Kokrajhar (dist Kokrajhar) 2,





SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
23-03-2024

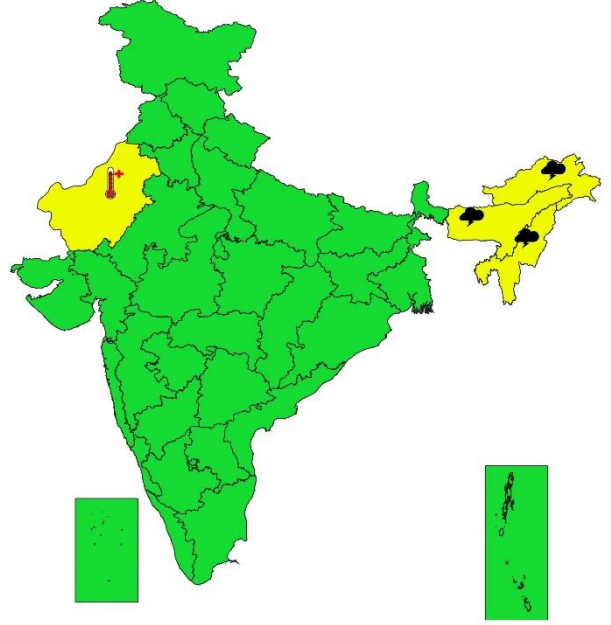


Subdivision Warning

- | | | | |
|------------|--------------|----------------------|---------------------------|
| Fog | Dust Storm | Very Heavy Rain | Subdivision Colour |
| Heavy Rain | Heat Wave | Extremely Heavy Rain | NO WARNING |
| Heavy Snow | Cold Wave | Strong Surface Winds | WATCH (BE UPDATED) |
| Hailstorm | Cold Day | Thunder & Lightning | ALERT (BE PREPARED) |
| | Ground Frost | | WARNING (TAKE ACTION) |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
24-03-2024



Subdivision Warning

- | | | | |
|------------|--------------|----------------------|---------------------------|
| Fog | Dust Storm | Very Heavy Rain | Subdivision Colour |
| Heavy Rain | Heat Wave | Extremely Heavy Rain | NO WARNING |
| Heavy Snow | Cold Wave | Strong Surface Winds | WATCH (BE UPDATED) |
| Hailstorm | Cold Day | Thunder & Lightning | ALERT (BE PREPARED) |
| | Ground Frost | | WARNING (TAKE ACTION) |

Impact expected and action suggested due to thunderstorm with lightning, gusty winds & Hailstorm: over East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha on 20th 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 West Bengal & Sikkim, Jharkhand, Bihar, East Uttar Pradesh, Jammu & Kashmir and Himachal Pradesh.
- Make necessary arrangements for draining out excess water from crop fields to avoid water stagnation in Sub Himalayan West Bengal, Odisha, Bihar and Arunachal Pradesh 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 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