



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

**Press Release
Date: 19th March, 2023
Time of Issue: 1300 hours IST**

**Subject: i) Rainfall accompanied with thunderstorm/hailstorm over Northwest & East India on 19th & 20th; over Central, West India and south Peninsula on 19th March.
ii) Widespread rainfall with isolated heavy rainfall over Northeast India during 19th-21st March, 2023.**

Weather observed during past 24hours ending at 0830 hrs IST of today:

- ❖ **Light/Moderate rainfall/thundershowers** observed over most parts of the country (Details of rainfall are given in Annexure 1).
- ❖ **Very heavy rainfall** occurred at isolated places over Odisha and **heavy rainfall** at isolated places over Bihar, Haryana, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu.
- ❖ **Hailstorm** observed at isolated places over Odisha, Bihar, Haryana, East Rajasthan, Madhya Pradesh, Gujarat State, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and North Interior Karnataka.

Weather Forecast and Warnings (Annexure II):

- ❖ A **Western Disturbance** as a cyclonic circulation lies over east Iran & adjoining Afghanistan and in middle tropospheric levels.
- ❖ A **trough** in middle & upper tropospheric westerlies runs roughly along Long. 78°E to the north of Lat. 22°N.
- ❖ A **cyclonic circulation** lies over East Rajasthan & neighbourhood and an east-west **trough** runs from this cyclonic circulation to Northwest Bay of Bengal in lower tropospheric levels.
- ❖ A **cyclonic circulation** lies over West Rajasthan & neighbourhood and a **trough** runs from north Punjab to this cyclonic circulation in lower tropospheric levels.
- ❖ A **trough/wind discontinuity** runs from South Interior Karnataka to west Vidarbha in lower tropospheric levels.
- ❖ Under the influence of above synoptic features, following weather is expected;

Northwest India: Scattered to fairly widespread light/moderate rainfall with **thunderstorm, lightning/gusty winds** likely over Western Himalayan Region and Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh & Rajasthan on 19th & 20th March, 2023. **Isolated hailstorm also likely over Uttarakhand during 19th-21st; over Himachal Pradesh & West Rajasthan on 19th and over Uttar Pradesh & East Rajasthan on 19th & 20th March, 2023.**

West & Central India: Isolated to scattered light/moderate rainfall with **thunderstorm, lightning & gusty winds** likely over Gujarat, Maharashtra, Madhya Pradesh, Vidarbha, Chhattisgarh on 19th March, 2023. **Isolated hailstorm also likely over Chhattisgarh on 19th March, 2023.**

South Peninsular India: Isolated to scattered light/moderate rainfall with **thunderstorm, lightning & gusty winds** likely over Andhra Pradesh, Telangana, Karnataka, north interior Tamil Nadu and Kerala on 19th March, 2023. **Isolated heavy rainfall very likely over Coastal Andhra Pradesh on 19th March, 2023.**

East & Northeast India: Fairly widespread to widespread light/moderate rainfall activity with **thunderstorm, lightning & gusty winds** likely over Sub-Himalayan West Bengal and Northeast India during 19th-23rd March and scattered to fairly widespread light/moderate rainfall/thundershowers over East India during 19th-21st March, 2023. **Isolated hailstorm very likely over West Bengal & Sikkim on 19th March, 2023.** Isolated **heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim during 19th-21st; over Gangetic West Bengal on 19th over Bihar on 20th March. **Isolated very heavy rainfall also likely over Assam & Meghalaya on 19th & 20th March.**

Maximum Temperatures Forecast during next 5 days:

- ❖ **Central & East India:** No significant change in maximum temperatures very likely during next 2 days and rise by 3-5°C thereafter.
- ❖ **Maharashtra:** Rise in maximum temperatures by 3-5°C very likely during next 3 days and no significant change thereafter.
- ❖ **Rest parts of the Country:** No significant change in Maximum Temperatures very likely during next 4-5 days.

Impact expected and action suggested due to isolated thunderstorm/lightning/gusty winds & Hailstorm

- **19th March:** Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Chhattisgarh, West Bengal & Sikkim;
- **20th March:** Uttarakhand, Uttar Pradesh and East Rajasthan.
- **21st March:** Uttarakhand.

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.

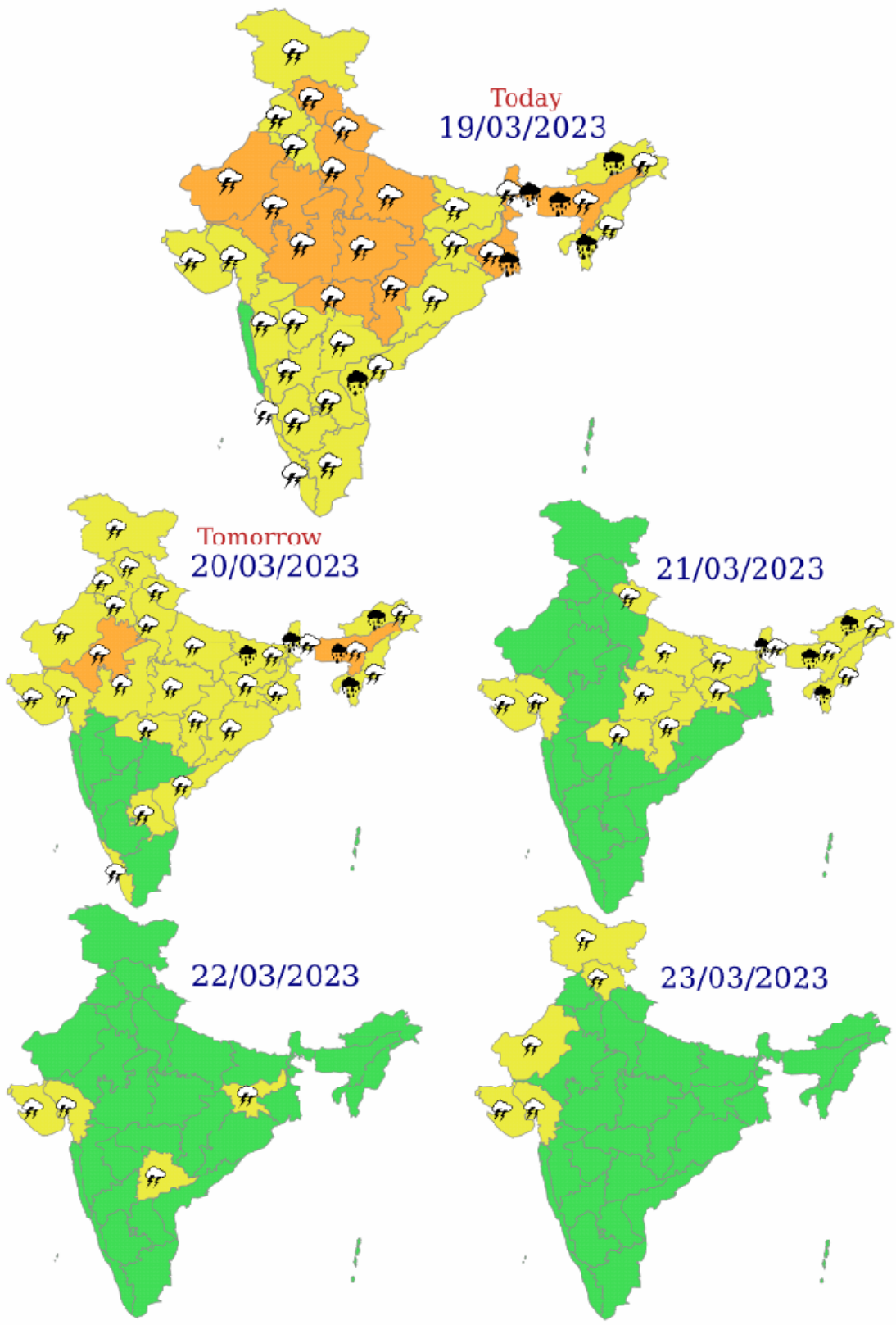
Advisory for farmers:

- Postpone harvesting of crops in Odisha, Jharkhand, Bihar, Uttarakhand, Uttar Pradesh, Chhattisgarh, Andhra Pradesh, Telangana, 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 to prevent it getting wet.
- Harvest the matured fruits and vegetables at the earliest in Assam and keep the harvested produce at safer places.
- Carry out harvesting of matured mustard, chickpea, wheat and cumin in Rajasthan at the earliest and keep them in safer places.
- 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/imd_latest/contents/all_india_forecast_bulletin.php

- ❖ **Light/moderate rainfall/thundershowers** observed **at most places over** West Bengal & Sikkim, Uttarakhand, Himachal Pradesh, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Telangana; **at many places over** Odisha, Jharkhand, Haryana, Chandigarh & Delhi, Jammu & Kashmir, Vidarbha and Rayalaseema; **at a few places over** Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Bihar, West Uttar Pradesh, Punjab, West Madhya Pradesh, Gujarat Region, Marathwada, Tamil Nadu, Puducherry & Karaikal, Interior Karnataka, Kerala & Mahe and Lakshadweep and **at isolated places** over East Uttar Pradesh, Rajasthan, East Madhya Pradesh, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Significant amount of rainfall (≥ 7 cm):**

 - **Odisha:** Koraput-15, Malkangiri-13, Bhadrak-11, Balasore-9, Mayurbhanj-7;
 - **Telangana:** Venkatapuram (dist Mulugu) 10, Garla (dist Mahabubabad) 10, Aswapuram (dist B. Kothagudem) 9, Mahabubabad (dist Mahabubabad) 9, Aswaraopeta (dist B. Kothagudem) 9, Chegunta (dist Medak) 9, Sathupalle (dist Khammam) 8, Tadwai Mlg (dist Mulugu) 8, Manuguru (dist B. Kothagudem) 8, Jammikunta (dist Karimnagar) 8, Yadagirigutta (dist Y. Bhuvanagiri) 8, Shankarapatnam (dist Karimnagar) 8, Kothagudem (dist B. Kothagudem) 7, Huzurabad (dist Karimnagar) 7, Bhuvanagiri (dist Y. Bhuvanagiri) 7, Dharmaram (dist Peddapalle) 7, Khanapur (dist Warangal) 7, Malyal (dist Mahabubabad) 7, Govindaraopet (dist Mulugu) 7, Mulakalapalle (dist B. Kothagudem) 7, Mominpet (dist Vikarabad) 7, Atmakurwrgl (dist Warangal) 7, Ghanpur (dist Jangaon) 7, Gudurwrgl (dist Mahabubabad) 7, Palawanacha (dist B. Kothagudem) 7;
 - **Coastal Andhra Pradesh & Yanam:** Yanam (dist Yanam) 10, Amalapuram (dist B R Ambedkar Konaseema) 8, Garugubilli (dist Parvathipuram Manyam) 8, Rapur (dist Spsr Nellore) 7;
 - **Bihar:** Baitunthpur (dist Gopalganj) 8;
 - **Kerala:** Thycattusery (Alappuzha district) 8, Neryamangalam (Ernakulam district) 7;
 - **Haryana:** Hodal (dist Palwal) 7;
 - **Chhattisgarh:** Gidam (dist Dantewada) 7, Dantewara (dist Dantewada) 7;
 - **Rayalaseema:** Rajampet (dist Annamayya District) 7;
 - **Tamilnadu:** Lower Anaicut (dist Thanjavur) 7.



Legends:

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

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