



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Date: 17<sup>th</sup> March, 2024

Time of Issue: 1300 hours IST

**Special Message (No.- 2)**

FROM: INDIA METEOROLOGICAL DEPARTMENT

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS  
CONTROL ROOM NDMA  
SECRETARY, MOES  
DIRECTOR GENERAL, DOORDARSHAN  
DIRECTOR GENERAL, AIR  
PIB MOES  
CHIEF SECRETARY, GOVT. OF MADHYA PRADESH  
CHIEF SECRETARY, GOVT. OF CHHATTISGARH  
CHIEF SECRETARY, GOVT. OF JHARKHAND  
CHIEF SECRETARY, GOVT. OF ODISHA  
CHIEF SECRETARY, GOVT. OF WEST BENGAL  
CHIEF SECRETARY, GOVT. OF MAHARASHTRA

**Subject: Light to moderate rainfall accompanied with thunderstorm, lightning & hail over East, Central & adjoining Peninsular India during 17<sup>th</sup>-20<sup>th</sup> with peak intensity on 19<sup>th</sup> March, 2024.**

**Weather Systems and Forecast & Warnings during next 5 days: (Annexure I)**

- ❖ A trough runs from west Vidarbha to north Kerala in lower tropospheric levels. The anti-cyclonic circulation now lies over Westcentral & adjoining Northwest Bay of Bengal in lower tropospheric levels. Under their influence:
  - ✓ Scattered to fairly widespread light to moderate rainfall with isolated **thunderstorms, lightning & gusty winds** very likely over **Gangetic West Bengal** during 17<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 Jharkhand, Odisha, Vidarbha, Chhattisgarh & East Madhya Pradesh during 17<sup>th</sup>-20<sup>th</sup> and Bihar during 19<sup>th</sup>-21<sup>st</sup> March, 2024. **Isolated hailstorm also very likely over Vidarbha, East Madhya Pradesh & Chhattisgarh during 17<sup>th</sup>-19<sup>th</sup> and Jharkhand & Odisha 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 & Jharkhand on 19<sup>th</sup> March, 2024.

The state-wise forecast is given below: (Warning graphics are given at ANNEXURE-I)

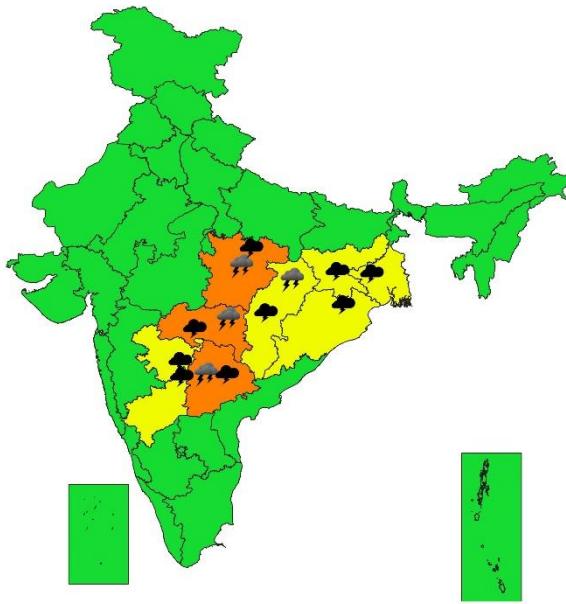
S. No.	State/sub-division	Forecast
1.	East Madhya Pradesh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph gusting to 60 kmph) at isolated places during 17<sup>th</sup> &amp; 20<sup>th</sup> and at a few places on 18<sup>th</sup> &amp; 19<sup>th</sup> March.</li> <li><b>Hailstorm also likely at isolated places during 17<sup>th</sup>- 19<sup>th</sup> March.</b></li> </ul>
2.	Vidarbha	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning &amp; gusty winds (speed reaching 30-40 kmph gusting to 50 kmph) at isolated places during 17<sup>th</sup>, 18<sup>th</sup> &amp; 20<sup>th</sup> and at a few places on 19<sup>th</sup> March.</li> <li><b>Hailstorm also likely at isolated places during 17<sup>th</sup>- 19<sup>th</sup> March.</b></li> </ul>
3.	Chhattisgarh	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning &amp; gusty winds (speed reaching 30-40 kmph gusting to 50 kmph) at isolated places on 17<sup>th</sup>; at a few places on 18<sup>th</sup> &amp; 20<sup>th</sup> and at many places on 20<sup>th</sup> March.</li> <li><b>Hailstorm also likely at isolated places during 17<sup>th</sup>- 19<sup>th</sup> March.</b></li> <li><b>Heavy rainfall at isolated places likely on 19<sup>th</sup> March.</b></li> </ul>
4.	Jharkhand	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm, lightning &amp; gusty winds (speed reaching 30-40 kmph gusting to 50 kmph) at isolated places on 17<sup>th</sup> &amp; 18<sup>th</sup>; at many places on 20<sup>th</sup> March.</li> <li>Light to moderate rain accompanied with thunderstorm, lightning &amp; gusty winds (speed reaching 40-50 kmph gusting to 60 kmph) at many places on 19<sup>th</sup> March.</li> <li><b>Hailstorm also likely at isolated places on 19<sup>th</sup> March.</b></li> <li><b>Heavy rainfall at isolated places likely on 19<sup>th</sup> March.</b></li> </ul>
5.	Gangetic West Bengal	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning with gusty winds (speed reaching upto 40-50 kmph gusting to 60 kmph) at some places on 17th March; <b>with</b> gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) on 18<sup>th</sup> March.</li> <li>Light to moderate rain at most places accompanied with <b>thundersquall</b> &amp; lightning with gusty winds (<b>speed reaching 50-60 kmph</b>) <b>at isolated places on 19<sup>th</sup> March</b>, with gusty winds (speed reaching upto 40-50 kmph gusting to 60 kmph) at a few places on 20<sup>th</sup> March; and gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) at a few places on 21<sup>st</sup> March.</li> <li><b>Hailstorm is likely at isolated places on 19<sup>th</sup> March.</b></li> </ul>

6.	Odisha	<ul style="list-style-type: none"> <li>Light to moderate rain accompanied with thunderstorm &amp; lightning at isolated places on 17<sup>th</sup> and at a few places on 18<sup>th</sup> March.</li> <li>Light to moderate rain at most places with thunderstorm &amp; lightning &amp; gusty winds (speed reaching upto 40-50 kmph gusting to 60 kmph) at isolated places on 19<sup>th</sup> March and light to moderate rain at many places with thunderstorm &amp; lightning &amp; gusty winds (speed reaching upto 30-40 kmph gusting to 50 kmph) at isolated places on 20<sup>th</sup> March.</li> <li><b>Hailstorm also likely at isolated places on 19<sup>th</sup> March.</b></li> <li><b>Heavy rainfall at isolated places likely on 19<sup>th</sup> &amp; 20<sup>th</sup> March.</b></li> </ul>
7.	West Madhya Pradesh	<ul style="list-style-type: none"> <li>Light rainfall at isolated places during 17<sup>th</sup>- 19<sup>th</sup> March.</li> </ul>

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)

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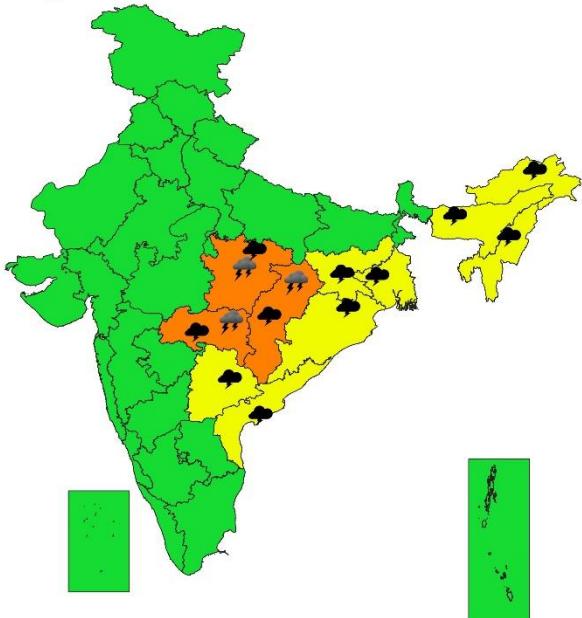
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
17-03-2024



Subdivision Warning

			Subdivision colour
	Fog		NO WARNING
	Heavy Rain		WATCH(BE UPDATED)
	Heavy Snow		ALERT (BE PREPARED)
	Hailstorm		Strong Surface Winds
			WARNING (TAKE ACTION)

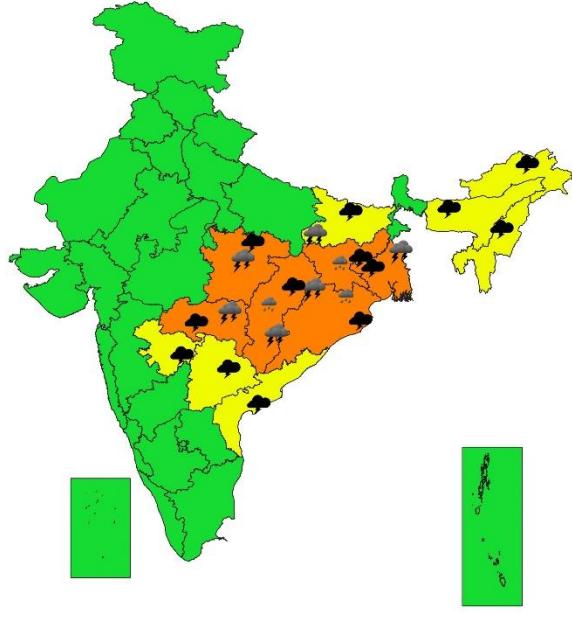
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
18-03-2024



Subdivision Warning

			Subdivision Colour
	Fog		NO WARNING
	Heavy Rain		WATCH(BE UPDATED)
	Heavy Snow		ALERT (BE PREPARED)
	Hailstorm		Strong Surface Winds
			WARNING (TAKE ACTION)

SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
19-03-2024

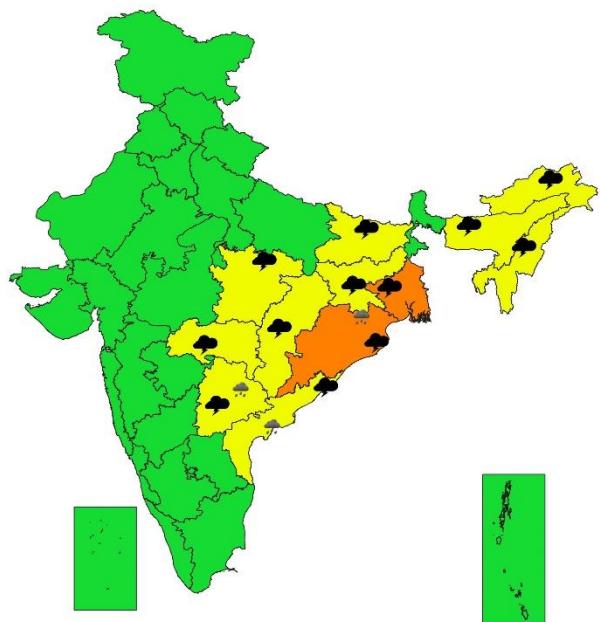


Subdivision Warning

			Subdivision Colour
	Fog		NO WARNING
	Heavy Rain		WATCH(BE UPDATED)
	Heavy Snow		ALERT (BE PREPARED)
	Hailstorm		Strong Surface Winds
			WARNING (TAKE ACTION)



SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
20-03-2024

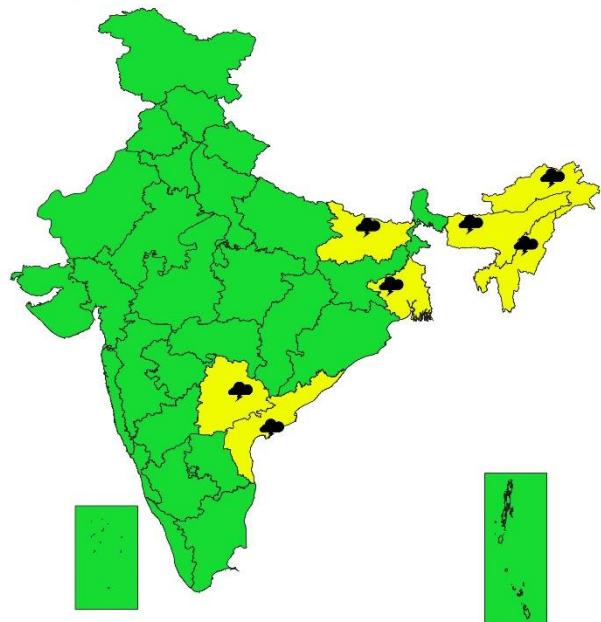


Subdivision Warning

	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  
21-03-2024



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 during 17<sup>th</sup>-19<sup>th</sup>; Gangetic West Bengal, Jharkhand & Odisha on 19<sup>th</sup> and Telangana on 17<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 East Madhya Pradesh, Vidarbha, Chhattisgarh and Telangana.
- In East Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Jharkhand and Gangetic West Bengal, 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.
- Provide mechanical support to horticultural crops and staking to vegetables in Odisha and Jharkhand.

## Legends & abbreviations:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **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		Flash Flood Risk	
Terms	Probability of Occurrence (%)		
Unlikely	< 25	High Risk (Take Action)	
Likely	25 - 50	Moderate Risk (Be Prepared)	
Very Likely	50 - 75	Low Risk (Be Updated)	
Most Likely	> 75		