



Government of India
Ministry of Earth Sciences
India Meteorological Department



Date: 18th March, 2024
Time of Issue: 1315 hours IST

Special Message (No. - 3)

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
CHIEF SECRETARY, GOVT. OF TELENGANA
CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH

Subject: Light to moderate rainfall accompanied with thunderstorm, lightning & hail likely over East, Central & adjoining Peninsular India during 18th-20th with peak intensity on 19th March, 2024.

Realised weather during past 24 hours till 0830 hours IST of today:

- ❖ **Light/moderate rainfall** observed at a few places over Chhattisgarh; at isolated places over Madhya Pradesh, Vidarbha, Gangetic West Bengal, Jharkhand, Odisha and Telangana.
- ❖ **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 during next 5 days: (Annexure I)

- ❖ A cyclonic circulation lies over west Vidarbha and a trough/wind discontinuity runs from south Tamil Nadu to west Vidarbha & another trough from Jharkhand to north Coastal Andhra Pradesh in lower tropospheric levels. The anti-cyclonic circulation lies over Westcentral & adjoining Northwest Bay of Bengal off Odisha coast 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**

and Odisha during 18th-21st with possibility of **hailstorm & squall (speed reaching 50-60 kmph)** on 19th March, 2024.

- ✓ Scattered to fairly widespread light to moderate rainfall with **thunderstorms, lightning & gusty winds** over Jharkhand, Vidarbha, Chhattisgarh & East Madhya Pradesh during 18th-20th and Bihar during 18th-21st March, 2024. **Isolated hailstorm also very likely over Vidarbha, East Madhya Pradesh & Chhattisgarh on 18th & 19th and Jharkhand on 19th March, 2024. Thundersquall (speed reaching 50-60 kmph)** likely over East Madhya Pradesh on 18th & 19th March.
- ✓ Isolated **heavy rainfall** very likely over Odisha on 19th & 20th and Chhattisgarh, Gangetic West Bengal & Jharkhand on 19th March, 2024.
- ✓ Scattered to fairly widespread light/moderate rainfall with isolated thunderstorms & lightning very likely over Telangana during 18th-20th with possibility of **hailstorm** on 18th & 19th and over Coastal Andhra Pradesh & Yanam during 18th-21st March, 2024. Isolated **heavy rainfall** also likely over these sub-divisions on 20th March, 2024

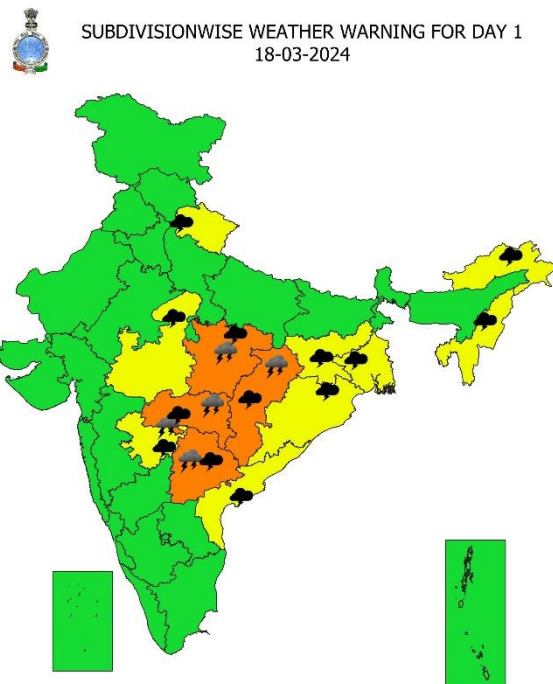
The state-wise forecast is given below: (Warning graphics are given at ANNEXURE-I)

S. No.	State/sub-division	Forecast
1.	East Madhya Pradesh	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thundersquall & lightning (speed reaching 50-60 kmph) at a few places on 18th; at isolated places on 19th March and with gusty winds (speed reaching 40- 50 kmph) at isolated places on 20th March. • Hailstorm also likely at isolated places on 18th & 19th March.
2.	Vidarbha	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thunderstorm, lightning & gusty winds (speed reaching 50-60 kmph) at a few places on 18th & 19th March. • Light to moderate rain accompanied with thunderstorm & lightning at isolated places on 20th March. • Hailstorm also likely at isolated places on 18th & 19th March.
3.	Chhattisgarh	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thunderstorm, lightning & gusty winds (speed reaching 40-50 kmph) at a few places on 18th; at many places on 19th and at a few places on 20th March. • Light to moderate rainfall at isolated places on 21st March. • Heavy rainfall at isolated places likely on 19th March. • Hailstorm also likely at isolated places on 18th & 19th March.
4.	Jharkhand	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thundersquall, lightning (speed reaching 50-60 kmph) at isolated places on 18th & 19th March and with gusty winds (speed reaching 40-50 kmph) at a few places on 20th March. • Light to moderate rain accompanied with thunderstorm, lightning at isolated places on 21st March. • Heavy rainfall at isolated places likely on 19th March. • Hailstorm also likely at isolated places on 19th March.
5.	Gangetic West Bengal	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thundersquall & lightning (speed reaching 50-60 kmph) at isolated places during 18th – 20th March. • Light to moderate rain accompanied with thunderstorm, lightning at isolated places on 21st and isolated light rainfall on 22nd March. • Heavy rainfall at isolated places likely on 19th March. • Hailstorm also likely at isolated places on 19th March.

6.	Odisha	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thundersquall & lightning (speed reaching 50-60 kmph) at isolated places on 18th & 19th March and with gusty winds (speed reaching upto 40-50 kmph) at many places on 20th March. • Light to moderate rainfall at isolated places on 21st & 22nd March. • Heavy rainfall at isolated places likely on 19th & 20th March • Hailstorm also likely at isolated places on 19th March.
7.	West Madhya Pradesh	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thunderstorm & lightning with gusty winds (speed reaching 40-50 kmph) at isolated places on 18th March. • Light to moderate rainfall likely at isolated places on 19th March.
8.	Telangana	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thundersquall & lightning (speed reaching 50-60 kmph) at isolated places on 18th & 19th and with gusty winds (speed reaching upto 40-50 kmph) at a few places on 20th March. • Heavy rainfall at isolated places likely on 20th March • Hailstorm also likely at isolated places on 18th & 19th March.
9.	Coastal Andhra Pradesh	<ul style="list-style-type: none"> • Light to moderate rain accompanied with thunderstorm & lightning at isolated places on 18th & 19th; at many places on 20th; at isolated places on 21st March. • Light to moderate rainfall likely at isolated places on 22nd March. • Heavy rainfall at isolated places likely on 20th March

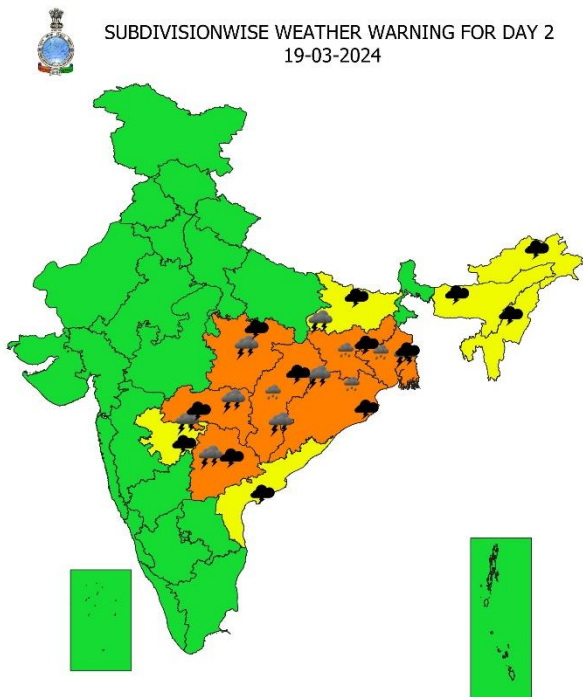
For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

Dr. Shashi Kant
Scientist 'D'
NWFC, IMD New Delhi



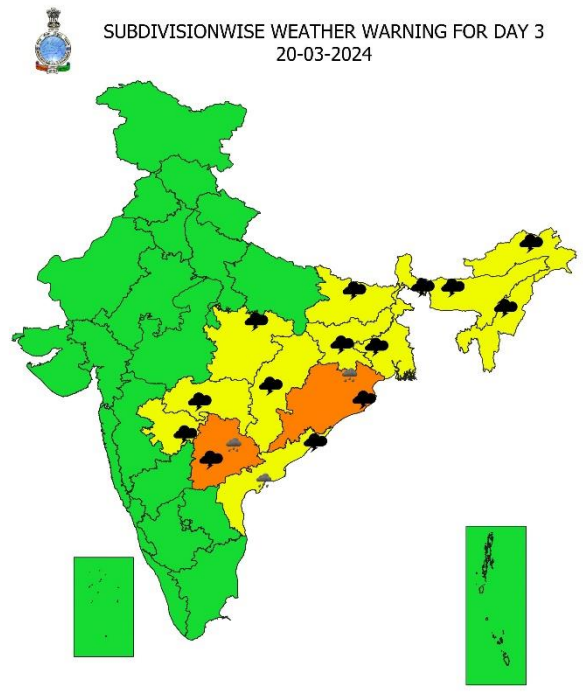
Subdivision Warning

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)



Subdivision Warning

Fog	Dust Storm	Very Heavy Rain	Subdivision Colour
Heavy Rain	Heat Wave	Extremely Heavy Rain	NO WARNING
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Hailstorm	Cold Day	Thunder & Lightning	ALERT (BE PREPARED)
	Ground Frost		WARNING (TAKE ACTION)

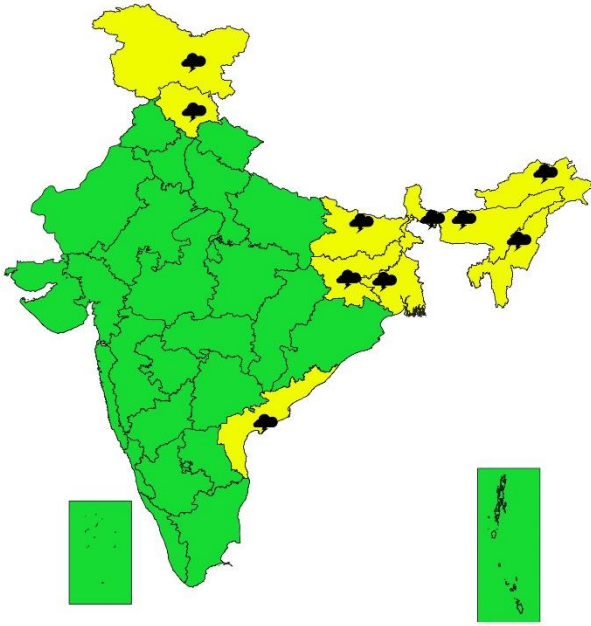


Subdivision Warning

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 4
21-03-2024

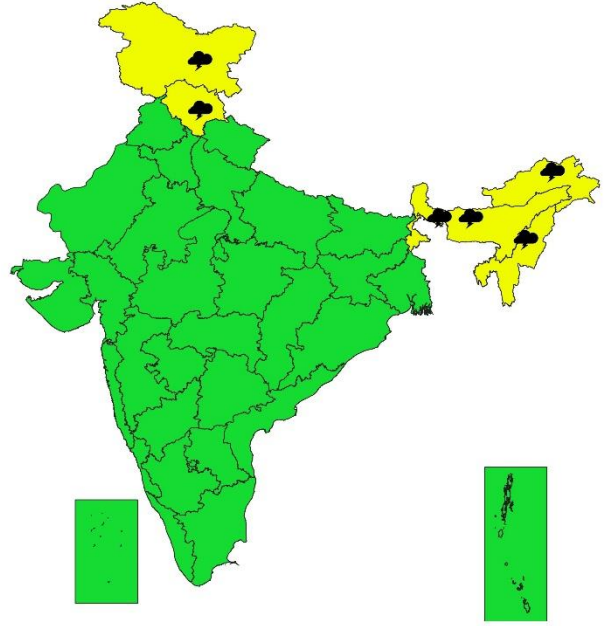


Subdivision Warning

- | | | | |
|--|--|--|---------------------------|
| | | | Subdivision Colour |
| | | | NO WARNING |
| | | | WATCH(BE UPDATED) |
| | | | ALERT (BE PREPARED) |
| | | | WARNING (TAKE ACTI |



SUBDIVISIONWISE WEATHER WARNING FOR DAY 5
22-03-2024



Subdivision Warning

- | | | | |
|--|--|--|---------------------------|
| | | | Subdivision Colour |
| | | | NO WARNING |
| | | | WATCH(BE UPDATED) |
| | | | ALERT (BE PREPARED) |
| | | | WARNING (TAKE ACTI |

Impact expected and action suggested due to thunderstorm with lightning, gusty winds & Hailstorm: over East Madhya Pradesh, Vidarbha, Chhattisgarh, Telangana, Marathwada on 18th & 19th; Gangetic West Bengal, Jharkhand & Odisha on 19th 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 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

Flash Flood Risk
High Risk (Take Action)
Moderate Risk (Be Prepared)
Low Risk (Be Updated)