



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

Press Release

Date: 09th September, 2023

Time of Issue: 1300 hours IST

Subject: 1) Heavy rainfall activity likely over Madhya Pradesh, Uttar Pradesh, Gujarat and Maharashtra on 9th & 10th September and over northeast India during next 3 days and decrease thereafter.

2) Increase in rainfall activity over Odisha, Andhra Pradesh and Telangana from 12th September due to development of a fresh cyclonic circulation over northwest & adjoining Westcentral Bay of Bengal.

Weather observed during past 24 hours ending at 0830 hours IST of today (Annexure I):

Significant Weather features:

- ❖ Yesterday's cyclonic circulation over southeast Madhya Pradesh lies over central parts of north Madhya Pradesh and extends upto middle tropospheric levels tilting southwards with height.
- ❖ A trough runs from cyclonic circulation over central parts of north Madhya Pradesh to south Madhya Maharashtra in lower & middle tropospheric levels.
- ❖ The western ends of Monsoon Trough is active and lies to the south of its normal position and eastern ends passes through near normal position. It passes through Jaisalmer, Ajmer, Guna, Mandla, Pendra Road, Jharsuguda, Digha and thence east-southeastwards to Northeast Bay of Bengal.
- ❖ A fresh cyclonic circulation likely to form over northwest & adjoining Westcentral Bay of Bengal around 12th September, 2023.

Weather Forecast and Warnings: (Annexure II)

East India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** activity very likely over *Sub-Himalayan West Bengal and Bihar on 09th*; Andaman & Nicobar Islands during 09th -12th and over Odisha on 12th & 13th September.

South India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over ghat areas of Tamil Nadu, Puducherry & Karaikal on 09th & 10th and over Kerala & Mahe during 09th -11th; over Coastal Andhra Pradesh and Telangana on 12th & 13th September.

Central India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Madhya Pradesh during 09th-11th September.

Isolated very heavy rainfall very likely over Madhya Pradesh on 09th September.

West India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Marathwada and Gujarat Region on 09th; over Konkan & Goa and

Madhya Maharashtra on 09th & 10th September.

Isolated very heavy rainfall very likely over Konkan & Goa, Madhya Maharashtra and Gujarat Region on 09th September.

Northeast India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy rainfall** activity very likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 09th-12th and over Arunachal Pradesh on 10th & 11th September.

Isolated very heavy rainfall very likely over Assam & Meghalaya on 12th September.

Northwest India: Light/moderate isolated to scattered rainfall/thunderstorm with isolated **heavy rainfall** activity very likely over East Rajasthan on 09th, Uttar Pradesh on 09th & 10th; Uttarakhand on 09th & 13th September.

For more details kindly refer:

https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

Annexure I

Rainfall observations: (from 0830 hours IST of yesterday to 0830 hours IST of today, the 09th September, 2023):

- **Extremely heavy rainfall** at isolated places over Konkan & Goa; **Heavy to very heavy rainfall** at isolated places over Madhya Maharashtra, Madhya Pradesh, Gujarat region, Sub-Himalayan West Bengal, Marathwada, and **heavy rainfall** at isolated places over Uttar Pradesh, Tamil Nadu, Puducherry & Karaikal, Vidarbha, Bihar, Gangetic West Bengal,
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- **Significant rainfall recorded (in cm):**
- - ✓ **Konkan & Goa:** Dapoli_agri (dist Ratnagiri) 25, Ratnagiri - Imd Obsy (dist Ratnagiri) 19, Wakwali_agri (dist Ratnagiri) 17, Guhagarh (dist Ratnagiri) 17, Mangaon (dist Raigad) 16, Chiplun (dist Ratnagiri) 16, Harnai Imd Obsy (dist Ratnagiri) 15, Roha (dist Raigad) 15, Tala (dist Raigad) 13, Vaibhavwadi (dist Sindhudurg) 11, Lanja (dist Ratnagiri) 10, Jawhar (dist Palghar) 10, Mhasla (dist Raigad) 10, Poladpur (dist Raigad) 9, Mahad (dist Raigad) 9, Sangameshwar Devrukh (dist Ratnagiri) 9, Bhiwandi (dist Thane) 9, Matheran (dist Raigad) 9, Mokheda - Fmo (dist Palghar) 9, Shriwardhan (dist Raigad) 9, Murud (dist Raigad) 8, Mandangad (dist Ratnagiri) 8, Ambernath (dist Thane) 8, Khalapur (dist Raigad) 8, Santacruz - Imd Obsy (dist Mumbai Suburban) 8, Murbad (dist Thane) 7, Ulhasnagar (dist Thane) 7, Rameshwar_agri (dist Sindhudurg) 7, Karjat_agri (dist Raigad) 7, Rajapur (dist Ratnagiri) 7,
 - ✓ **Madhya Maharashtra:** Trimbakshwar (dist Nashik) 15, Harsul - Fmo (dist Nashik) 15, Ozharkheda - Fmo (dist Nashik) 13, Jamner (dist Jalgaon) 11, Lonavala_agri (dist Pune) 11, Mahabaleshwar- Imd Obsy (dist Satara) 11, Peth (dist Nashik) 10, Igatpuri (dist Nashik) 9, Navapur (dist Nandurbar) 8, Dindori (dist Nashik) 8, Surgana (dist Nashik) 8, Yaval (dist Jalgaon) 7, Ambegaon Ghodegaon (dist Pune) 7, Pachora (dist Jalgaon) 7, Gaganbawada (dist Kolhapur) 7, Sinnar (dist Nashik) 7, Bodwad (dist Jalgaon) 7, Nashik - Imd Obsy (dist Nashik) 7, Dahigaon - Fmo (dist Jalgaon) 7,
 - ✓ **East Madhya Pradesh:** Orchha (dist Niwari) 15, Gohparu (dist Shahdol) 13, Niwari (dist Niwari) 12, Bijadandi (dist Mandla) 10, Jabalpur-aws (dist Jabalpur) 9, Jaisinagar (dist Sagar) 7, Satna (raghurajnagar) (dist Satna) 7, Prithvipur (dist Niwari) 7,
 - ✓ **West Madhya Pradesh:** Jhirnya (dist Khargone) 14, Bagli (dist Dewas) 14, Khategaon (dist Dewas) 14, Kannod (dist Dewas) 12, Nepanagar (dist Burhanpur) 12, Pandhana (dist Khandwa)

11, Pithampur (dist Dhar) 10, Burhanpur (dist Burhanpur) 10, Morena-aws (dist Morena) 10, Chanderi (dist Ashoknagar) 9, Hatpiplaya (dist Dewas) 9, Indore (dist Indore) 9, Lahar (dist Bhind) 9, Gairatgang (dist Raisen) 8, Khandwa (dist Khandwa) 8, Mhow (dist Indore) 7, Raisen-aws (dist Raisen) 7, Badnawar (dist Dhar) 7, Datia-aws (dist Datia) 7, Sendhwa(med) (dist Barwani) 7, Dhar-aws (dist Dhar) 7, Punasa Dam (dist Khandwa) 7,

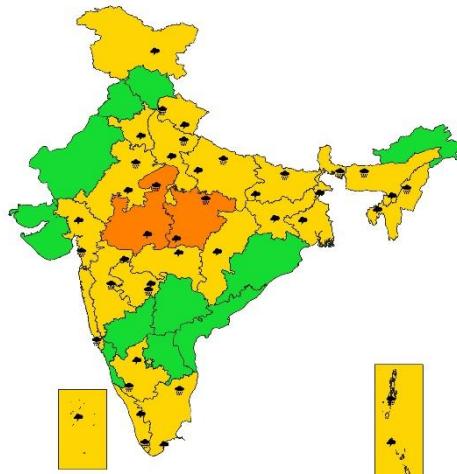
- ✓ **Sub-Himalayan West Bengal:** Lava : 14 Jhallong : 12, Samsing : 9, Pedong, Amfu Kalimpong, Algarah : 8, Kalimpong Pto, Darjeeling Pto, Darjeeling, Rongo : 7
- ✓ **Gujarat Region:** Kaprada (dist Valsad) 13, Subir (dist Dangs) 12, Dangs (ahwa) (dist Dangs) 11, Dharampur (dist Valsad) 10, Nanipalson (dist Valsad) 10, Khanvel (dist Dadara & Nagar Haveli) 9, Khergam (dist Navsari) 9, Madhbun (dist Dadara & Nagar Haveli) 8, Ankleshwer (dist Bharuch) 8, Valsad_ Kvk Aws (dist Valsad) 8, Silvassa (dist Dadara & Nagar Haveli) 8, Mangrol (dist Surat) 7,
- ✓ **Marathwada:** Soegaon (dist Chh. Sambhajinagar) 13,
- ✓ **West Uttar Pradesh:** Jhansi (dist Jhansi) 11, Shahjahapur Obsy (dist Shahjahanpur) 7, Shahjahanpur (t) (dist Shahjahanpur) 7, Pawayan (dist Shahjahanpur) 7, Bhogaon (dist Mainpuri) 7,
- ✓ **Tamilnadu, Puducherry & Karaikal:** Taluk Office Pandalur (dist Nilgiris) 9,
- ✓ **Bihar:** Katihar North (dist Katihar) 9, Jamui (dist Jamui) 7;
- ✓ **Gangetic West Bengal:** Contai : 7
- ✓ **Vidarbha:** Malkapur (dist Buldhana) 7,
- ✓ **East Uttar Pradesh:** Kaiserganj (dist Bahraich) 7,

Obsy: Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation

Annexure II



SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
(9-9-2023)



Subdivision Warning

- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm

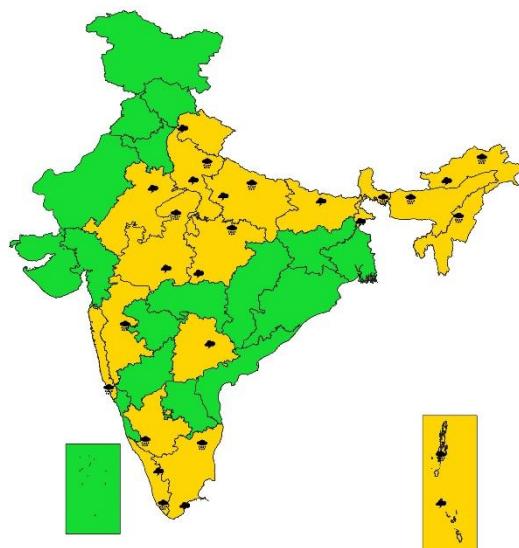
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color

- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- WARNING (TAKE ACTION)



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
(10-9-2023)



Subdivision Warning

- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm

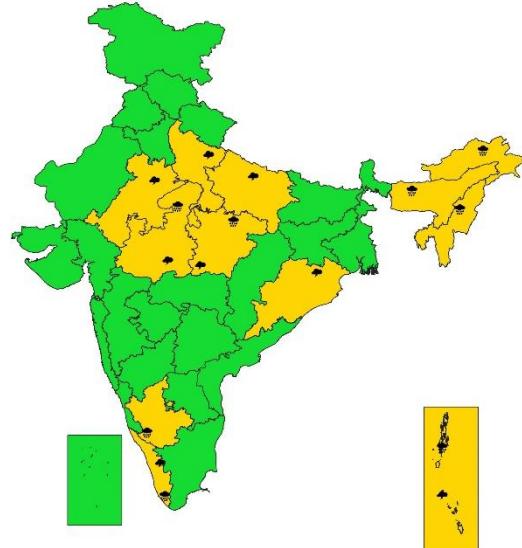
Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color

- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- WARNING (TAKE ACTION)



SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(11-9-2023)



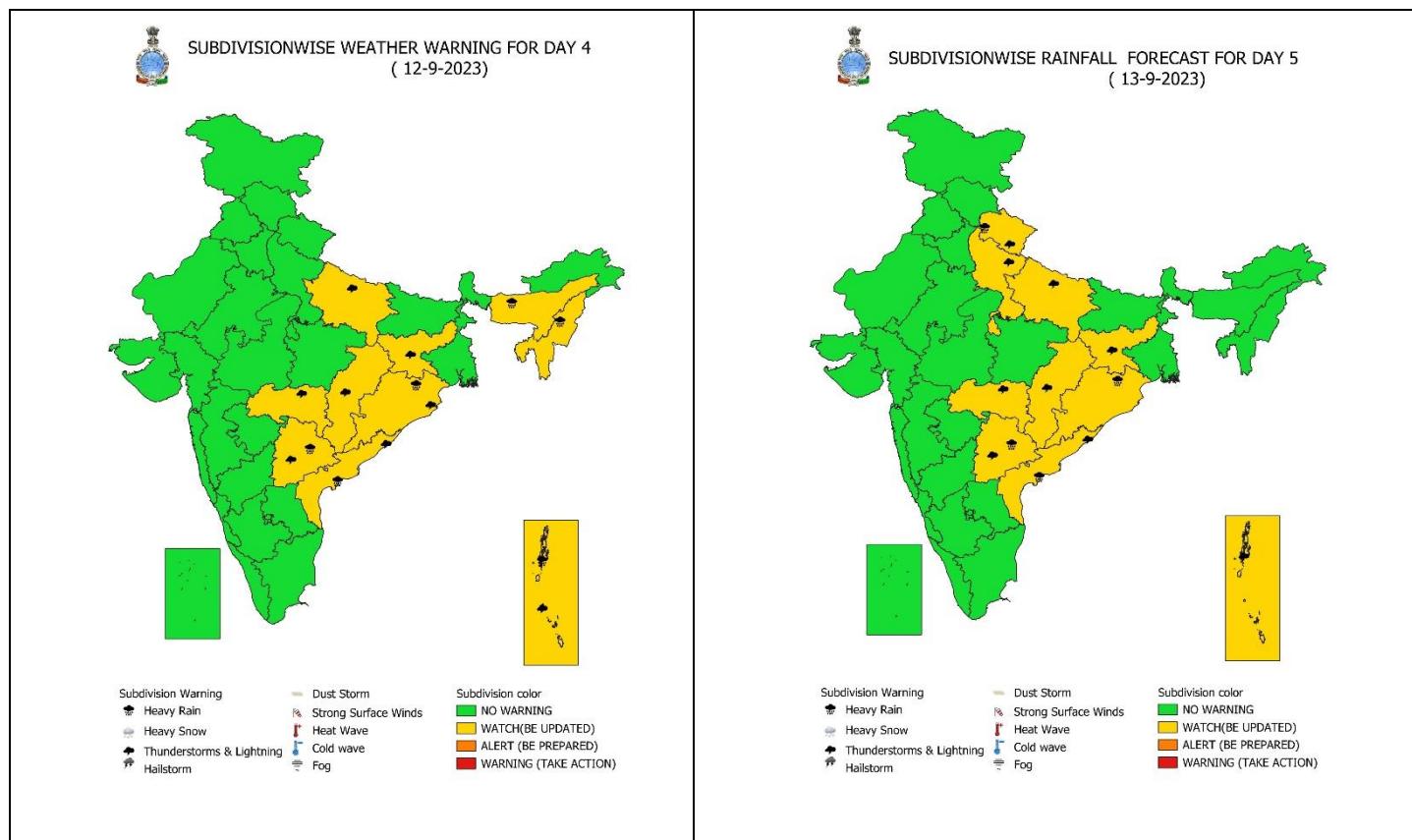
Subdivision Warning

- Heavy Rain
- Heavy Snow
- Thunderstorms & Lightning
- Hailstorm

Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog

Subdivision color

- NO WARNING
- WATCH(BE UPDATED)
- ALERT (BE PREPARED)
- WARNING (TAKE ACTION)



Impact & Action Suggested due to very heavy rainfall over Madhya Pradesh on 09th September.

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.

Legends:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **AWS:** Automatic Weather Station
- ❖ **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)

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)	