



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

Press Release

Date: 17th September, 2023

Time of Issue: 1345 hours IST

Subject: 1) A Low Pressure Area lies over Southeast Rajasthan & adjoining West Madhya Pradesh.

2) Isolated extremely heavy rainfall very likely over Gujarat region on 17th & 18th and over southeast Rajasthan on 17th September.

**Weather observed during past 24 hours ending at 0830 hours IST of today (Annexure I):
For Flash Flood Guidance Map (Annexure III)**

Significant Weather features:

- ❖ Yesterday's Well Marked Low Pressure Area over westcentral Madhya Pradesh now weakened into a Low Pressure Area over Southeast Rajasthan & adjoining West Madhya Pradesh. It is likely to move gradually over southwest Rajasthan during next 2 days.
- ❖ The Monsoon Trough lies south to its normal position.
- ❖ **A Western Disturbance** as a trough in middle tropospheric westerlies runs roughly along Long. 68°E to the north of Lat. 28°N.

Weather Forecast and Warnings: (Annexure II)

Central & West India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy to very heavy rainfall** very likely over West Madhya Pradesh & North Konkan during 17th-18th; North Madhya Maharashtra on 17th; Gujarat Region & south Rajasthan during 17th-19th and Saurashtra & Kutch during 17th-20th September.

- ❖ **Isolated extremely heavy rainfall very likely over Gujarat region on 17th & 18th and over southeast Rajasthan on 17th September.**

Northwest India: Light/moderate fairly widespread to widespread rainfall/thunderstorm with isolated **heavy falls** very likely over Uttarakhand on 17th & 18th September and over Jammu division, Himachal Pradesh, Punjab, Haryana, north Uttar Pradesh on 17th September.

East India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Andaman & Nicobar Islands during 17th -18th; Sub-Himalayan West Bengal & Sikkim on 20th & 21st, Gangetic West Bengal on 19th & 20th, Jharkhand on 21st and over Odisha during 17th – 21st September.

Isolated very heavy rainfall very likely over Andaman & Nicobar on 17th and over Sub-Himalayan West Bengal & Sikkim on 21st September.

South India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over interior Tamil Nadu, Coastal Karnataka and Kerala on 17th September.

Northeast India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy rainfall** activity very likely over Nagaland, Manipur, Mizoram & Tripura during 17th-21st; Assam & Meghalaya during 18th-21st and over Arunachal Pradesh on 20th & 21st September.

Isolated very heavy rainfall very likely over Assam, Meghalaya, Nagaland & Manipur on 20th & 21st, and over Arunachal Pradesh on 21st September.

For more details kindly refer:

[https://mausam.imd.gov.in/responsive/all india forcast bulletin.php](https://mausam.imd.gov.in/responsive/all%20india%20forcast%20bulletin.php)

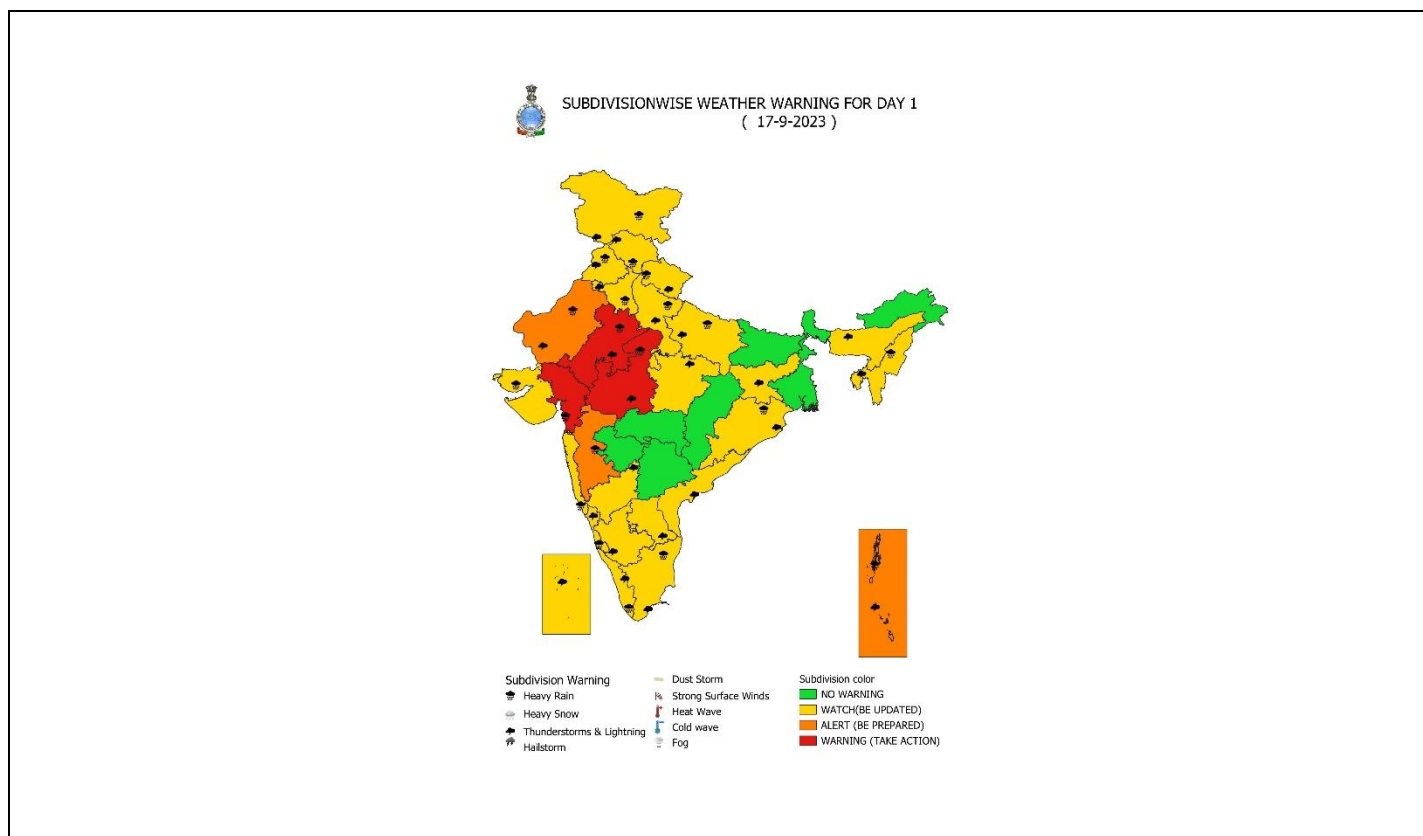
Rainfall observations: (from 0830 hours IST of yesterday to 0830 hours IST of today, the 17th September, 2023):

- **Exceptionally heavy rainfall (in cm) recorded over three districts in southwest Madhya Pradesh and one district in southeast Rajasthan during past 24 hours (ending at 0830 IST of 17.09.2023) are as follows:**
 - Kathiwada (dist. Alirajpur) - 34
 - Meghnagar (dist. Jhabua) - 32
 - Dhar-aws (dist. Dhar) - 30
 - Bagidora Sr (dist. Banswara) - 37
- **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over East Rajasthan, West Madhya Pradesh, West Uttar Pradesh, Gujarat region; **Heavy to very heavy rainfall** at isolated places over Haryana and Tamil Nadu and **heavy rainfall** at isolated places over West Rajasthan, Goa, Madhya Maharashtra, Odisha, Andaman & Nicobar Islands and Rayalaseema.
- **Significant rainfall recorded (in cm):**
 - ✓ **East Rajasthan:** Bagidora Sr (dist Banswara) 37, Sajjangarh Sr (dist Banswara) 28, Sallopat Sr (dist Banswara) 27, Shergarh Sr (dist Banswara) 27, Kesarpura Sr (dist Banswara) 25, Banswara Sr (dist Banswara) 22, Danpur (dist Banswara) 21, Bhungra Sr (dist Banswara) 20, Ghatol (dist Banswara) 20, Khushalgarh (dist Banswara) 18, Pipalkhunt Sr (dist Pratapgarh) 15, Mounntabu Tehsil Sr (dist Sirohi) 14, Galiakot Sr (dist Dungarpur) 12, Garhi (dist Banswara) 11, Arnod Sr (dist Pratapgarh) 11, Pratapgarh (dist Pratapgarh) 10, Chhotisadri (dist Pratapgarh) 9, Chikali Sr (dist Dungarpur) 9, Nimbahera (dist Chittorgarh) 9, Dhariabad (dist Pratapgarh) 9, Arthuna (dist Banswara) 8, Aspur (dist Dungarpur) 8, Sarwar (dist Ajmer) 7, Jagpura Sr (dist Banswara) 7, Dungla Sr (dist Chittorgarh) 7, Kotda Sr (dist Udaipur) 7, Nithuwa Sr (dist Dungarpur) 7, Badesar Sr (dist Chittorgarh) 7, Sirohi (dist Sirohi) 7,
 - ✓ **West Madhya Pradesh:** Kathiwada (dist Alirajpur) 34, Jabot (dist Alirajpur) 32, Meghnagar (dist Jhabua) 32, Dhar-aws (dist Dhar) 30, Alirajpur (dist Alirajpur) 30, Thandla (dist Jhabua) 29, Bajna (dist Ratlam) 28, Udaigarh (dist Alirajpur) 28, Badnawar (dist Dhar) 27, Bhabhra (dist Alirajpur) 27, Raoti (dist Ratlam) 26, Sardarpur (dist Dhar) 26, Ratlam-aws (dist Ratlam) 24, Jhabua-aws (dist Jhabua) 24, Gandhwani (dist Dhar) 22, Rama (dist Jhabua) 22, Bagh (dist Dhar) 22, Pithampur (dist Dhar) 22, Dharampuri Tappa (dist Dhar) 21, Petlawad (dist Jhabua) 21, Sailana (dist Ratlam) 21, Ranapur (dist Jhabua) 20, Piploda (dist Ratlam) 19, Mhow (dist Indore) 19, Nisarpur (dist Dhar) 18, Tal (dist Ratlam) 18, Barwaha (dist Khargone) 18, Maheshwar (dist Khargone) 18, Manawar (dist Dhar) 17, Umarvan (dist Dhar) 17, Bhikangaon (dist Khargone) 17, Tirla (dist Dhar) 17, Hatod (dist Indore) 16, Khandwa (dist Khandwa) 16, Kasarwad (dist Khargone) 16, Sanawad (dist Khargone) 16, Depalpur (dist Indore) 15, Thikri (dist Barwani) 15, Indore (dist Indore) 15, Nalchha (dist Dhar) 14, Badnagar (dist Ujjain) 14, Bagli (dist Dewas) 14, Anjad (dist Barwani) 14, Gautampura (dist Indore) 13, Gogawan (dist Khargone) 13, Rajpur (dist Barwani) 13, Kukshi (dist Dhar) 13, Nagda (dist Ujjain) 13, Hatpiplaya (dist Dewas) 13, Chachariyapati (dist Barwani) 13, Khachrod (dist Ujjain) 13, Punasa Dam (dist Khandwa) 13, Shegaon (dist Khargone) 12, Jaora (dist Ratlam) 12, Sanwer (dist Indore) 12, Khargone-aws (dist Khargone) 11, Sondwa (dist Alirajpur) 11, Niwali (dist Barwani) 11, Warla (dist Barwani) 11, Bhavgarh (dist Mandsaur) 11, Badwani (dist Barwani) 11, Dahi (dist Dhar) 11, Pati (dist Barwani) 9, Dhundhadaka (dist Mandsaur) 9, Tonkhurd (dist Dewas) 9, Mandsaur-aws (dist Mandsaur) 9, Dewas-aws (dist Dewas) 8, Pandhana (dist Khandwa) 8, Khirkiya-arg (dist Harda) 8, Bhagwanpura (dist Khargone) 8, Sendhwa (med) (dist Barwani) 7, Jhirnya (dist Khargone) 7, Jawad (dist Neemuch) 7, Sonkatch (dist Dewas) 7, Jawar (dist Sehore) 7, Khalwa (dist Khandwa) 7,
 - ✓ **West Uttar Pradesh:** Milak (dist Rampur) 25, Bareilly Pbo (dist Bareilly) 10,
 - ✓ **Gujarat Region:** Morva Hadaf (dist Panchmahal) 25, Chhota Udepur (dist Chhota Udepur) 25, Shahera (dist Panchmahal) 24, Dahod (dist Dahod) 24, Wanakbori (dist Mahisagar) 23, Limkheda (dist Dahod) 20, Godhra (dist Panchmahal) 19, Lunawada (dist Mahisagar) 18, Garbada (dist Dahod) 18, Jambughoda (dist Panchmahal) 16, Santrampur (dist Mahisagar) 15, Virpur (dist Mahisagar) 15, Fatepura (dist Dahod) 15, Jhalod (dist Dahod) 15, Jetpur Pavi (dist Chhota Udepur) 14, Devgad Baria (dist Dahod) 13, Bayad (dist Aravalli) 13, Dhansura (dist Aravalli) 13, Bodeli (dist Chhota Udepur) 13, Singvad (dist Dahod) 13, Balasinor (dist Mahisagar) 12, Quant (dist Chhota Udepur) 11, Sagbara (dist Narmada) 11, Dhanpur (dist Dahod) 11, Sanjeli (dist Dahod) 11, Halol (dist Panchmahal) 11, Modasa (dist Aravalli) 10, Dediapada (dist Narmada) 10, Kukarmunda (dist Tapi) 10, Dabhoi (dist Vadodara) 9, Tilakwada (dist Narmada) 9, Sankheda (dist Chhota Udepur) 9, Garudeshwar (dist Narmada) 9, Ghoghamba (dist Panchmahal) 9, Nizer (dist Tapi) 8, Kadana (dist Mahisagar) 8, Desar (dist Vadodara) 7, Kalol (dist Panchmahal) 7, Umerpada (dist Surat) 7, Bhiloda (dist Aravalli) 7, Nandod (dist Narmada) 7, Kapadvanj (dist Kheda) 7, Anand (dist Anand) 7,

- ✓ **Haryana:** Pehowa (dist Kurukshetra) 12, Paundri Rev (dist Kaithal) 10, Kaithal (dist Kaithal) 7, Ismailabad (dist Kurukshetra) 7,
- ✓ **West Rajasthan:** Kolayat Magra (dist Bikaner) 10, Desuri (dist Pali) 7,
- ✓ **Konkan & Goa:** Quepem (dist South Goa) 7,
- ✓ **Madhya Maharashtra:** Dhadgaon/akrani- Hydro (dist Nandurbar) 8, Akkalkuwa (dist Nandurbar) 8, Nandurbar (dist Nandurbar) 7,
- ✓ **Odisha:** Banki (dist Cuttack) 9, Champua (dist Keonjhar) 7, Tigiria (dist Cuttack) 7,
- ✓ **Andaman & Nicobar Islands:** Long Island- 9, Port Blair- 9,
- ✓ **Tamil Nadu:** Tindivanam (dist Villupuram), Tiruttani (dist Tiruvallur) 13 each; Marakkanam (dist Villupuram) 11; RSCL-2 Kanjanur (dist Villupuram), Uthiramerur (dist Kancheepuram) 8 each; RSCL-2 Nemoor (dist Villupuram), Arcot (dist Ranipet), Thamaraiakkam (dist Tiruvallur), Tiruttani PTO (dist Tiruvallur), Wallajah (dist Ranipet), Ambathur (dist Tiruvallur), Tiruvallur (dist Tiruvallur), Thiruvallangadu (dist Tiruvallur), Ranipet (dist Ranipet), Poondi (dist Tiruvallur), Kathivakkam (dist Chennai) 7 each;
- ✓ **Rayalaseema:** Madanapalle (dist Annamayya District) 8, Satyavedu (dist Tirupati) 7, Arogyavaram (dist Annamayya District) 7, Punganur (dist Chittoor) 7,

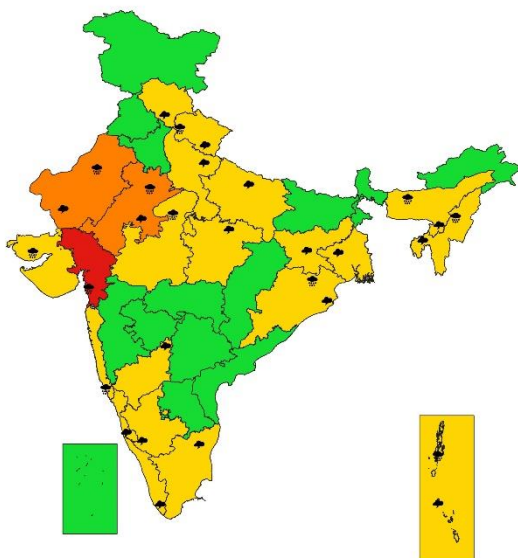
Obsy: Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation

Annexure II





SUBDIVISIONWISE WEATHER WARNING FOR DAY 2 (18-9-2023)



Subdivision Warning

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

Dust Storm

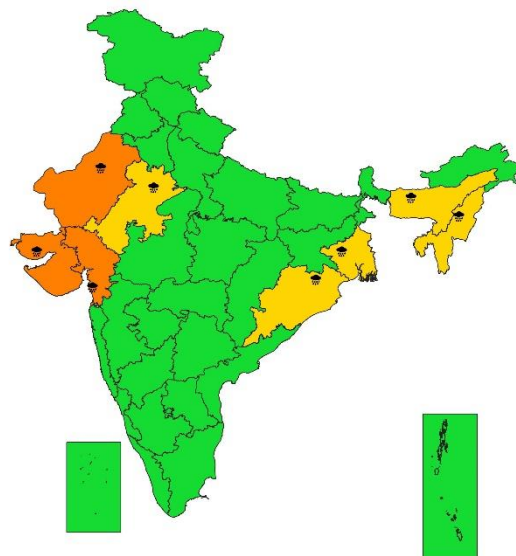
- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

Subdivision color

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



SUBDIVISIONWISE WEATHER WARNING FOR DAY 3 (19-9-2023)



Subdivision Warning

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

Dust Storm

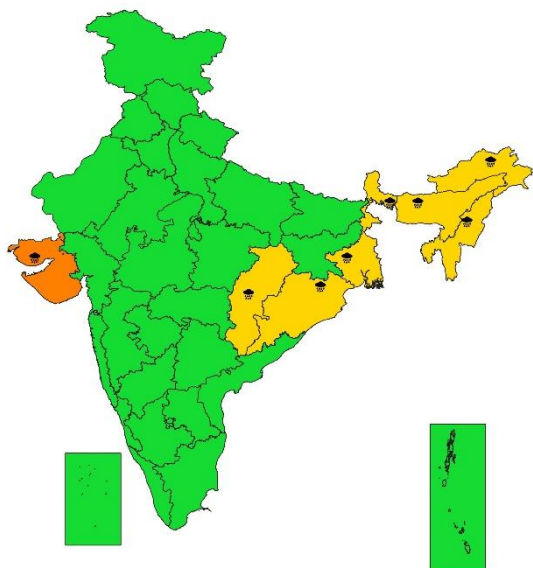
- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

Subdivision color

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



SUBDIVISIONWISE WEATHER WARNING FOR DAY 4 (20-9-2023)



Subdivision Warning

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

Dust Storm

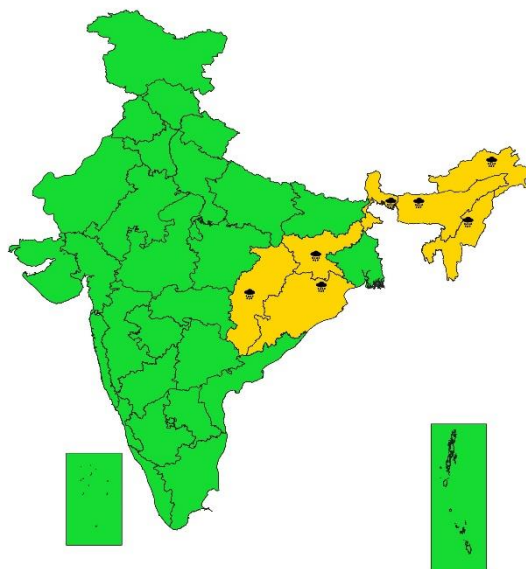
- Strong Surface Winds
- Heat Wave
- Cold wave
- Fog

Subdivision color

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



SUBDIVISIONWISE RAINFALL FORECAST FOR DAY 5 (21-9-2023)



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/extremely heavy falls over West Madhya Pradesh, Madhya Maharashtra and Andaman & Nicobar Islands on 17th; West Rajasthan and Gujarat region during 17th-19th; East Rajasthan on 17th & 18th and over Saurashtra & Kutch on 19th & 20th 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.

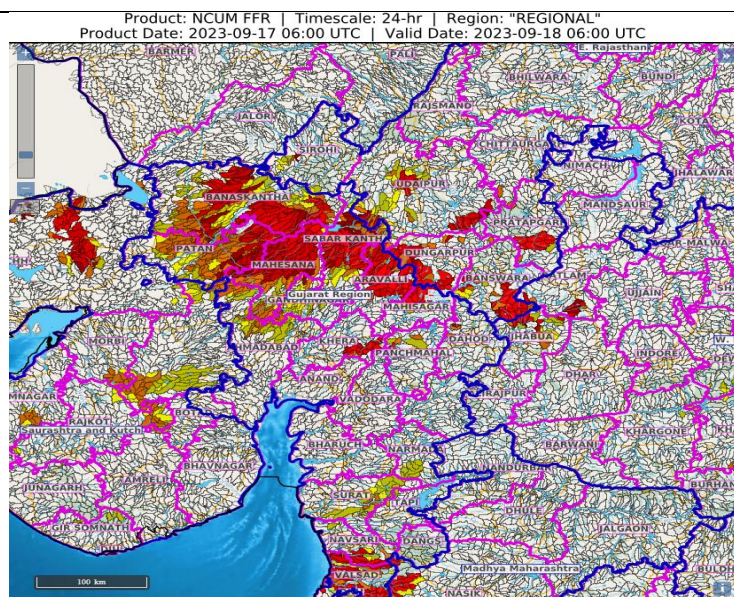
Action suggested:

- 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.

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 18-09-2023 :

Light to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand, South part of East Rajasthan, Gujarat Region and adjoining West Madhya Pradesh and Saurashtra & Kutch Met Sub-divisions during next 24 hours.

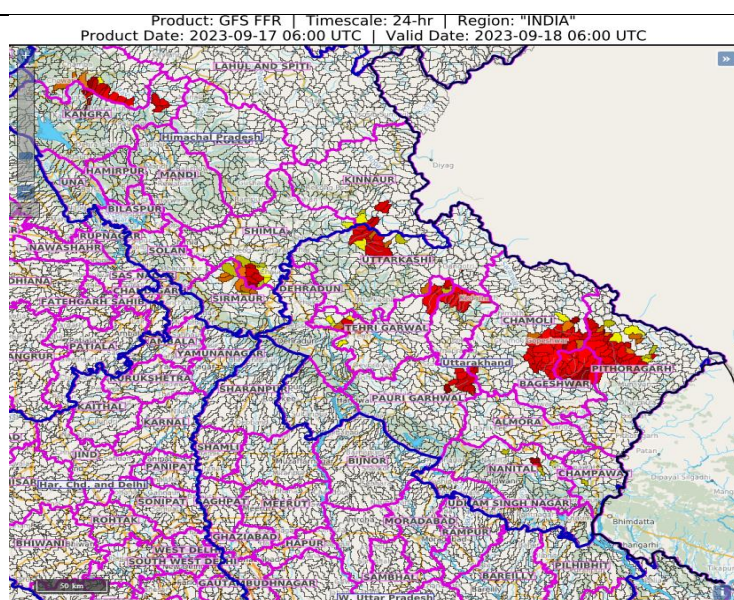
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 18-09-2023 :

Light to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand Met Sub-divisions during next 24 hours.














Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



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)