



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 09<sup>th</sup> August, 2024

Time of Issue: 1310 hours IST

**Subject: (i) Fairly widespread to widespread rainfall with isolated heavy rainfall very likely over Northeast & East India and Western Himalayan Region during next 7 days.**  
**(ii) Subdued rainfall activity likely over most parts of Peninsular India during next 7 days.**

**Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)**

**Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Sub-Himalayan West Bengal & Sikkim; **heavy to very heavy rainfall** at isolated places over Assam & Meghalaya, Himachal Pradesh, Haryana, East Uttar Pradesh, East Rajasthan, Chhattisgarh, Tamil Nadu; **Heavy rainfall** at isolated places over Arunachal Pradesh, Odisha, Bihar, Punjab, West Uttar Pradesh, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Gujarat Region and Coastal Karnataka.

**Weather Systems**

- ✓ A cyclonic circulation lies over southeast Uttar Pradesh & neighbourhood extending upto lower tropospheric levels.
- ✓ Another cyclonic circulation lies over northeast Rajasthan & neighbourhood extending upto middle tropospheric levels tilting southwestwards with height.
- ✓ The **Monsoon trough** is active and near its normal position at mean sea level.
- ✓ A cyclonic circulation lies over south Jharkhand & neighbourhood in middle tropospheric levels tilting southwards with height.

**Forecast & Warnings: (upto 7 days):**

**(Rainfall distribution and Graphics for warning are given in Annexure II & III respectively)**

❖ **Northwest India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Himachal Pradesh, Uttarakhand & East Rajasthan; scattered to fairly widespread rainfall over Jammu-Kashmir, Uttar Pradesh, Punjab, Haryana-Chandigarh-Delhi, West Rajasthan during the week.
- ✓ Isolated **very heavy rainfall** also likely over Himachal Pradesh on 09<sup>th</sup> & 10<sup>th</sup>; Uttarakhand on 10<sup>th</sup> & 11<sup>th</sup>; East Rajasthan during 09<sup>th</sup> – 11<sup>th</sup> August.
- ✓ Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, Rajasthan, East Uttar Pradesh during 09<sup>th</sup>-15<sup>th</sup>; Punjab on 10<sup>th</sup>; Haryana-Chandigarh during 09<sup>th</sup>-12<sup>th</sup>; West Uttar Pradesh during 09<sup>th</sup>-13<sup>th</sup>; Jammu-Kashmir on 10<sup>th</sup>, 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup> August.

❖ **West & Central India**

- ✓ Scattered to fairly widespread light to moderate rainfall very likely over Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Gujarat Region during the week; isolated to scattered rainfall over Madhya Maharashtra, Marathwada, Saurashtra & Kutch during the week.

- ✓ **Very heavy rainfall** at isolated places over East Madhya Pradesh on 09<sup>th</sup>; West Madhya Pradesh on 10<sup>th</sup> August.
- ✓ **Heavy rainfall** very likely at isolated places over Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Gujarat Region on 09<sup>th</sup> & 10<sup>th</sup>; Chhattisgarh on 09<sup>th</sup> August.

❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over East & Northeast India during the week.
- ✓ **Very heavy rainfall** very likely at isolated places over Arunachal Pradesh on 09<sup>th</sup> & 10<sup>th</sup>; Meghalaya on 09<sup>th</sup>, Bihar on 10<sup>th</sup> August.
- ✓ Isolated **heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Bihar during 09<sup>th</sup>-15<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 09<sup>th</sup>-11<sup>th</sup>; Odisha, Jharkhand, Gangetic West Bengal on 09<sup>th</sup>, 10<sup>th</sup> & during 13<sup>th</sup> -15<sup>th</sup> August.

❖ **South Peninsular India:**

- ✓ Scattered to fairly widespread light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Karnataka and isolated to scattered rainfall over Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema during the week.
- ✓ **Heavy rainfall** very likely at isolated places over Tamil Nadu during 09<sup>th</sup> – 13<sup>th</sup>; Kerala during 11<sup>th</sup> – 14<sup>th</sup>; Coastal Karnataka on 09<sup>th</sup> August.

**For more details, kindly refer:** [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 09.08.2024(in cm):**

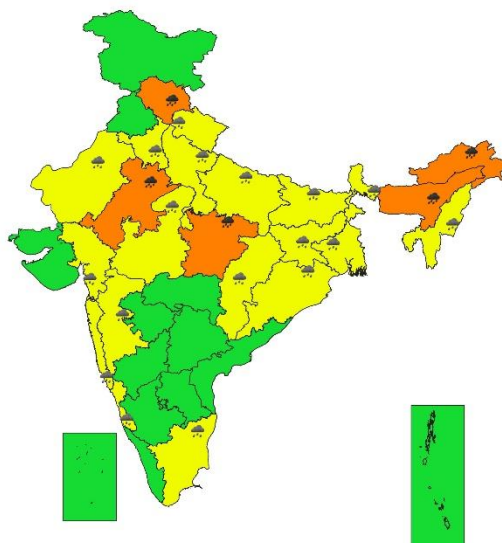
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Buxaduar (dist Alipurduar) 25, Jalpaiguri (dist Jalpaiguri) 10, Hasimara (dist Alipurduar) 8, Domohani (dist Jalpaiguri) 7,
- ❖ **East Rajasthan:** Mahwa (dist Dausa) 19, Nadbai (dist Bharatpur) 16, Viratnagar (dist Jaipur) 11, Bayana (dist Bharatpur) 11, Pahari Sr (dist Bharatpur) 11, Thanagazi (dist Alwar) 11, Dausa (dist Dausa) 10, Shahpura (dist Jaipur) 9, Sikrai (dist Dausa) 9, Bansur (dist Alwar) 8, Kotkasim (dist Alwar) 8, Kotputli (dist Jaipur) 8, Tizara (dist Alwar) 7, Sajjangarh (dist Banswara) 7, Behror (dist Alwar) 7, Deeg (dist Bharatpur) 7, Kathumer (dist Alwar) 7,
- ❖ **Tamil Nadu:** Vilupuram (dist Villupuram) 18, Sethiyathope (dist Cuddalore) 12, Bhuvanagiri (dist Cuddalore), Pondicherry Town (Puducherry) 11 each, Tirukoilur (dist Kallakurichi), Manamadurai (dist Sivagangai) 9, Chidambaram (dist Cuddalore), Vepur (dist Cuddalore), Tindivanam (dist Villupuram), Yercaud (dist Salem), Thirukkanur (Puducherry) 8 each, Thiruchuzhi (dist Virudhunagar), Kattumayilur (dist Cuddalore), Arani (dist Tiruvannamalai), Aruppukottai (dist Virudhunagar), RSCL-2Valavanur (dist Villupuram) 7 each;
- ❖ **East Uttar Pradesh:** Ramnagar (dist Barabanki) 17, Karwi (dist Chitrakoot) 10, Fatehpur Tehsil (dist Barabanki) 10, Sirauli Gauspur Tehsil (dist Barabanki) 8, Kannauj(t) (dist Kannauj) 8,
- ❖ **Haryana:** Punhana (dist Nuh) 17, Jhirka (dist Nuh) 13, Nuh (dist Nuh) 10,
- ❖ **Himachal Pradesh:** Jogindarnagar (dist Mandi) 16, Dharmsala (dist Kangra) 11, Kataula (dist Mandi) 11, Bharari (dist Hamirpur) 10, Kandaghat (dist Solan) 8, Palampur (dist Kangra) 8, Pandoh (dist Mandi) 8, Baijnath (dist Kangra) 7, Kufri (dist Shimla) 7,
- ❖ **Chhattisgarh:** Korba (dist Korba) 16, Katghora (dist Korba) 14, Rajpur (dist Balrampur) 11, Kusmi (dist Balrampur) 10, Darri (dist Korba) 10, Bhaisma (dist Korba) 10, Ajarbahar (dist Korba) 7, Kelhari (dist Manendragarh Bharatpur) 7, Kunkuri (dist Jashpur) 7,
- ❖ **Assam & Meghalaya:** Mawsynram (dist East Khasi Hills) 16, Cherrapunji (dist East Khasi Hills) 12, Chauldhowaghat (dist Lakhimpur) 10, Cherrapunji (dist East Khasi Hills) 9, Mawkyrwat (dist South West Khasi Hills) 7, Aie Nh Xing (dist Bongaigaon) 7,
- ❖ **Coastal Karnataka:** Gokarna (dist Uttara Kannada) 10,
- ❖ **Arunachal Pradesh:** Nachu (dist Upper Subansiri) 10, Pasighat\_ (dist East Siang) 7,
- ❖ **Bihar:** Nangar Nausa (dist Nalanda) 10, Chandi (dist Nalanda) 8, Pothia (dist Kishanganj) 8, Galgalia (dist Kishanganj) 8, Dagarua (dist Purnea) 8, Tedhagach (dist Kishanganj) 7, Danapur (dist Patna) 7, Amas (dist Gaya) 7, Bankey Bazar (dist Gaya) 7, Chenari (dist Rohtas) 7,
- ❖ **Konkan & Goa:** Dabolim Navy (dist South Goa) 9, Mulde (dist Sindhudurg) 6, Mapusa (dist North Goa) 6, Sawantwadi (dist Sindhudurg) 6,
- ❖ **Punjab:** Rayya (dist Amritsar) 8,
- ❖ **East Madhya Pradesh:** Khargapur (dist Tikamgarh) 8,
- ❖ **West Uttar Pradesh:** Budaun (dist Badaun) 8,
- ❖ **Gujarat Region:** Vadodara (dist Vadodara) 8,
- ❖ **Odisha:** Astaranga (dist Puri) 8, Khandapara (dist Nayagarh) 8.

7 Days Rainfall Forecast								
S. No.	Subdivision	08-Aug	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	FWS	WS	WS	WS	FWS	FWS
2	ARUNACHAL PRADESH	WS	WS	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	WS	WS	FWS	FWS	FWS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	FWS	WS	WS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	WS	WS	WS	FWS	FWS
6	GANGETIC WEST BENGAL	WS	FWS	FWS	WS	WS	WS	WS
7	ODISHA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
8	JHARKHAND	WS	FWS	FWS	FWS	WS	WS	WS
9	BIHAR	FWS	WS	WS	WS	FWS	FWS	FWS
10	EAST UTTAR PRADESH	FWS	FWS	FWS	FWS	SCT	SCT	SCT
11	WEST UTTAR PRADESH	FWS	FWS	FWS	FWS	SCT	SCT	SCT
12	UTTARAKHAND	WS	WS	WS	FWS	FWS	WS	WS
13	HARYANA CHANDIGARH & DELHI	SCT	FWS	FWS	SCT	SCT	SCT	SCT
14	PUNJAB	ISOL	FWS	SCT	ISOL	ISOL	ISOL	SCT
15	HIMACHAL PRADESH	WS	WS	WS	FWS	FWS	FWS	FWS
16	JAMMU & KASHMIR AND LADAKH	SCT	FWS	FWS	SCT	SCT	SCT	SCT
17	WEST RAJASTHAN	SCT	FWS	FWS	FWS	FWS	FWS	SCT
18	EAST RAJASTHAN	FWS	WS	WS	FWS	FWS	FWS	FWS
19	WEST MADHYA PRADESH	WS	WS	FWS	FWS	FWS	FWS	FWS
20	EAST MADHYA PRADESH	WS	WS	WS	FWS	FWS	FWS	FWS
21	GUJARAT REGION	WS	WS	FWS	FWS	FWS	SCT	SCT
22	SAURASHTRA & KUTCH	FWS	SCT	SCT	SCT	SCT	ISOL	ISOL
23	KONKAN & GOA	WS	WS	WS	WS	WS	FWS	FWS
24	MADHYA MAHARASHTRA	SCT	SCT	SCT	SCT	SCT	ISOL	ISOL
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	FWS	FWS	SCT	SCT	SCT	SCT	FWS
27	CHHATTISGARH	WS	FWS	FWS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	SCT	ISOL	ISOL	ISOL	SCT
29	TELANGANA	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	FWS	FWS	FWS	SCT	SCT
32	COASTAL KARNATAKA	WS	FWS	FWS	SCT	SCT	SCT	SCT
33	NORTH INTERIOR KARNATAKA	FWS	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
35	KERALA & MAHE	FWS	FWS	FWS	WS	WS	WS	FWS
36	LAKSHADWEEP	SCT	FWS	FWS	FWS	FWS	SCT	SCT

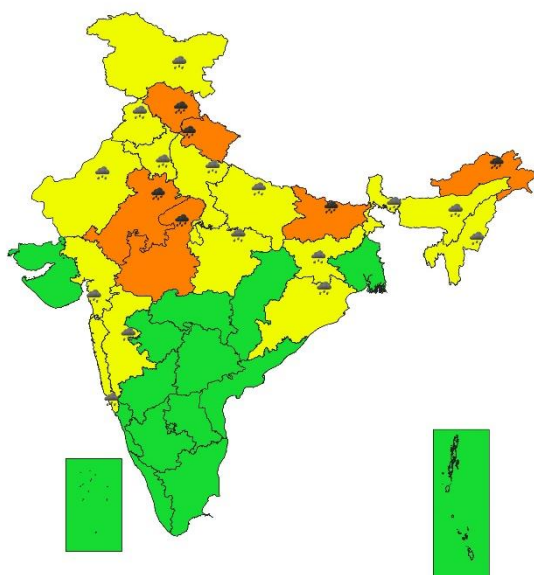
- As the lead period increases forecast accuracy decreases.



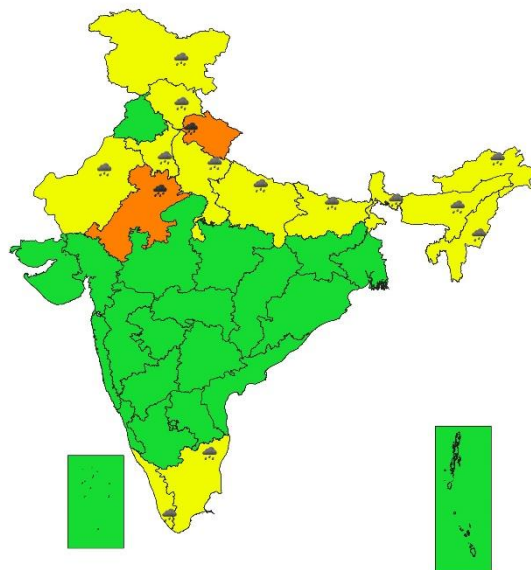
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
09-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
10-08-2024

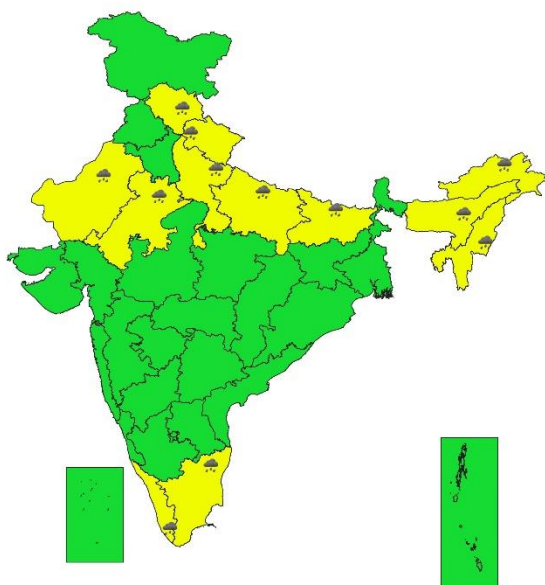


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
11-08-2024

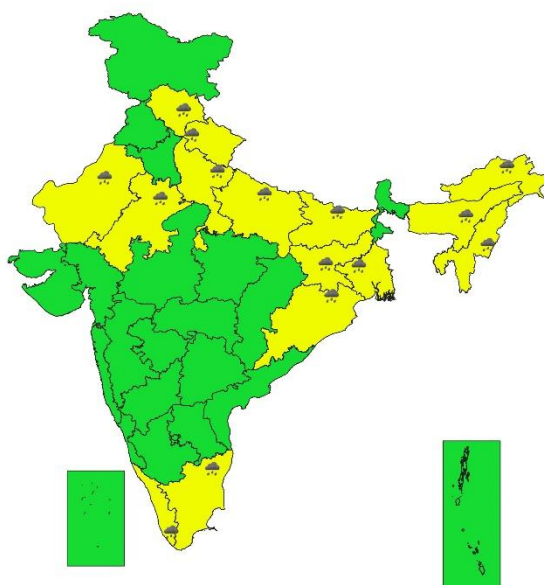




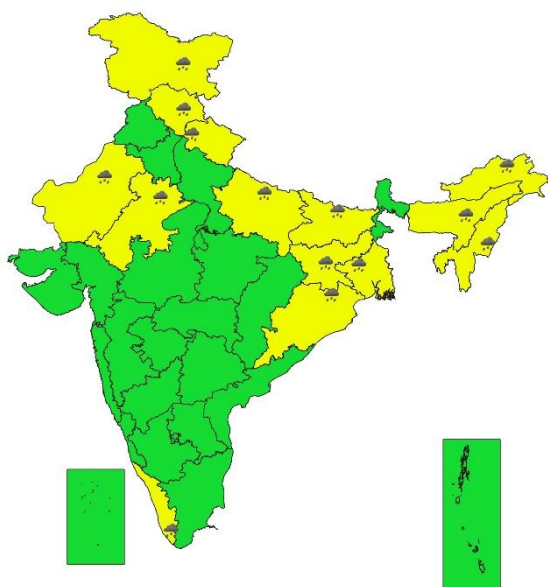
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
12-08-2024



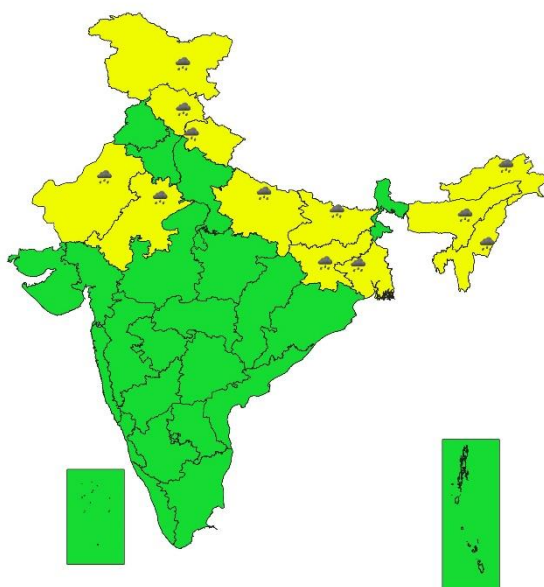
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
13-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6  
14-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7  
15-08-2024



- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



## Impact due to

- **Very heavy rainfall** at isolated places over East Madhya Pradesh, Meghalaya on 09<sup>th</sup>; Himachal Pradesh, Arunachal Pradesh on 09<sup>th</sup> & 10<sup>th</sup>; Uttarakhand on 10<sup>th</sup> & 11<sup>th</sup>; East Rajasthan during 09<sup>th</sup> – 11<sup>th</sup>; Bihar, West Madhya Pradesh on 10<sup>th</sup> August.
- **Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of north Chhattisgarh, Odisha and adjoining Jharkhand, Himachal Pradesh, Uttarakhand Met Sub-divisions on 09<sup>th</sup> & 10<sup>th</sup> August. (ANNEXURE IV)**
  - ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
  - ✓ Occasional reduction in visibility due to heavy rainfall.
  - ✓ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
  - ✓ Minor damage to kutcha roads.
  - ✓ Possibilities of damage to vulnerable structure.
  - ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
  - ✓ Damage to horticulture and standing crops in some areas due to inundation.
  - ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

## Action Suggested

- ✓ Check for traffic congestion on your route before leaving for your destination.
- ✓ Follow any traffic advisories that are issued in this regard.
- ✓ Avoid going to areas that face the water logging problems often.
- ✓ Avoid staying in vulnerable structure.

## Agromet advisories for Heavy Rainfall likely over various parts of the country

- Drain out excess water from field crops and horticultural crops in Arunachal Pradesh, Meghalaya, Sub-Himalayan West Bengal, Bihar, Himachal Pradesh, Haryana, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Tamil Nadu and Coastal Karnataka.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Assam, Odisha, Uttarakhand, West Uttar Pradesh, West Rajasthan, Konkan & Goa and Madhya Maharashtra (ghat areas).
- Provide mechanical support to horticultural crops & staking to vegetables.
- In Arunachal Pradesh, make proper arrangement for runoff management in Jhum rice fields by putting obstacles across the slopes.
- In Meghalaya, withhold sowing of cowpea and millets.

**Flash Flood Guidance:**

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 10-08-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

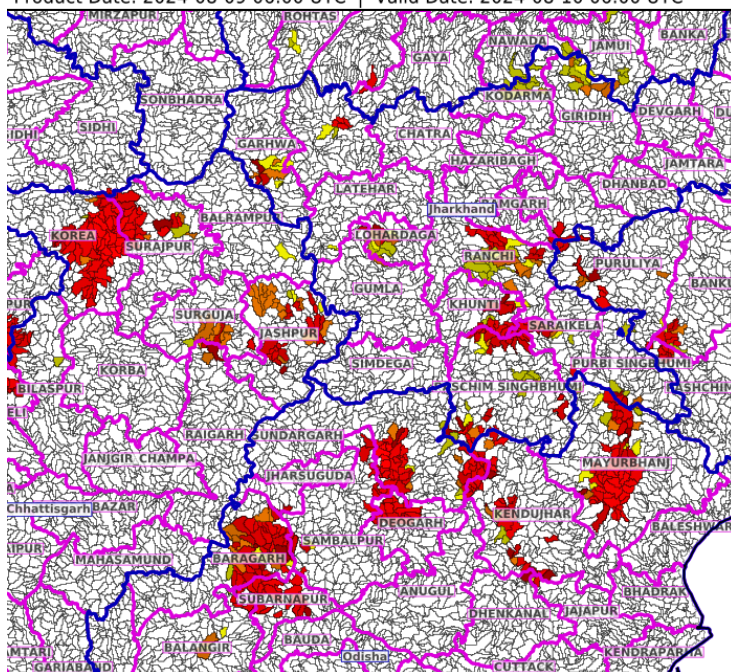
North Chhattisgarh - Balarampur, Bilaspur, Jashpur, Korea, Mungeli, Surajpur and Surguja districts.

Odisha - Balangir, Baragarh, Deogarh, Dhenkanal, Jharsuguda, Kendujhar, Sambalpur, Subarnapur and Sundargarh districts.

Adjoining Jharkhand - Bokaro, East Singhbhum, Garhwa, Khunti, Lohardaga, Palamu, Ramgarh, Ranchi, Saraikela and West Singhbhum districts.

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.

Product: GFS FFR | Timescale: 24-hr | Region: "INDIA"  
Product Date: 2024-08-09 06:00 UTC | Valid Date: 2024-08-10 06:00 UTC



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 10-08-2024 :

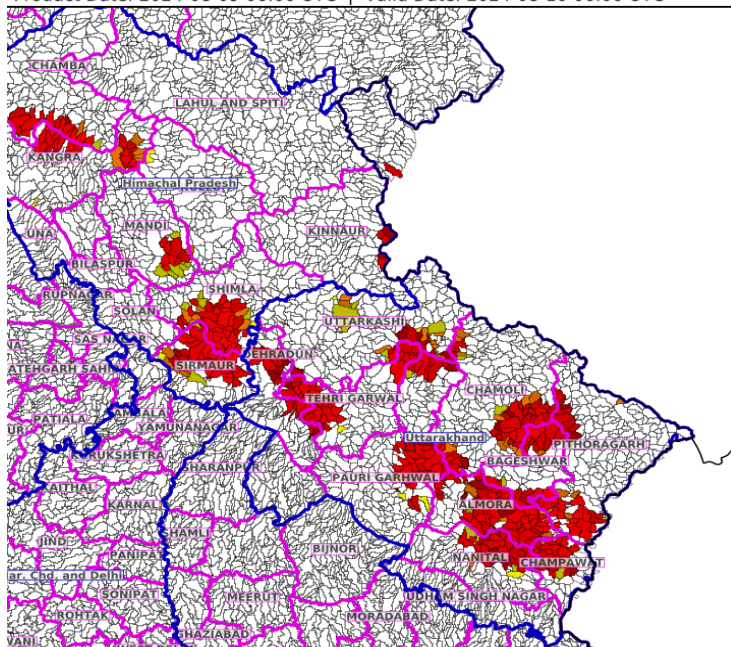
Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Himachal Pradesh - Chamba, Kangra, Kinnaur, Mandi and Shimla districts.

Uttarakhand - Almora, Bageshwar, Chamoli, Champawat, Dehradun, Haridwar, Nanital, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garwal and Uttarkashi districts.

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

Product: GFS FFR | Timescale: 24-hr | Region: "INDIA"  
Product Date: 2024-08-09 06:00 UTC | Valid Date: 2024-08-10 06:00 UTC





### Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **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 Marathawada.
  - **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)



Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75













## LEGENDS

### 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

 <b>Rain/ Snow *</b>	Heavy: 64.5 to 115.5 mm/cm * Very Heavy: 115.6 to 204.4 mm/cm* Extremely Heavy: > 204.4 mm/cm *
 <b>Heat Wave</b>	When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions <b>(a) Based on Departure from normal</b> Heat Wave: Maximum Temperature Departure from normal $4.5^{\circ}\text{C}$ to $6.4^{\circ}\text{C}$ . Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$ <b>(b). Based on Actual maximum temperature</b> Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$ . Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$ <b>(c). Criteria for heat wave for coastal stations</b> When maximum temperature departure is $> 4.5^{\circ}\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^{\circ}\text{C}$
 <b>Warm Night</b>	<b>When maximum temperature remains <math>40^{\circ}\text{C}</math></b> Warm Night: When minimum temperature departure $4.5^{\circ}\text{C}$ to $6.4^{\circ}\text{C}$ . Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$ .
 <b>Cold Wave</b>	<b>When minimum temperature of a station <math>\leq 10^{\circ}\text{C}</math> for plains and <math>\leq 0^{\circ}\text{C}</math> for hilly regions.</b> <b>(a). Based on departure</b> Cold Wave: Minimum Temperature Departure from normal $-4.5^{\circ}\text{C}$ to $-6.4^{\circ}\text{C}$ . Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$ <b>(b) Based on actual Minimum Temperature (for Plains only)</b> Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$ Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$ <b>(c) For Coastal Stations</b> When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$
 <b>Cold Day</b>	<b>When minimum temperature of a station <math>\leq 10^{\circ}\text{C}</math> for plains and <math>\leq 0^{\circ}\text{C}</math> for hilly regions</b> <b>Based on departure</b> Cold Day: Maximum Temperature Departure from normal $-4.5^{\circ}\text{C}$ to $-6.4^{\circ}\text{C}$ . Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$
 <b>Fog</b>	<b>Phenomenon of small droplets suspended in air and the horizontal visibility &lt; 1km</b> Moderate Fog: When the visibility between 500-200 metres Dense Fog: when the visibility between 50- 200 metres Very Dense Fog: when the visibility < 50 metres
 <b>Thunderstorm</b>	Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)
 <b>Dust/Sand Storm</b>	An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.
 <b>Frost</b>	<b>Ice deposits on ground</b> Air temperature $\leq 4^{\circ}\text{C}$ ( over Plains)
 <b>Squall</b>	<b>A strong wind that rises suddenly, lasts for atleast 1 minute.</b> Moderate: Wind speed 52-61 kmph Severe: Wind speed 62-87 kmph Very Severe: Wind speed $> 87$ kmph
 <b>Sea State</b>	<b>Effect of various waves in the sea over specific area</b> Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre Phenomenal: Wind speed $> 117$ kmph ( $> 63$ knots) & Wave height $> 14$ metre
 <b>Cyclone</b>	Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots) Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots) Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots) Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots) Super Cyclone Strom: Wind speed $> 220$ kmph ( $> 119$ knots)