



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 10<sup>th</sup> August, 2024

Time of Issue: 1321 hours IST

**Subject: (i) Heavy to very heavy rainfall very likely over Western Himalayan Region and adjoining plains of north and central India during next 2 days, and decrease thereafter.  
(ii) Isolated heavy rainfall very likely over Kerala, Tamil Nadu, Puducherry during next 5 days with isolated very heavy rainfall during 11<sup>th</sup> - 13<sup>th</sup> August.**

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

**Heavy to very heavy rainfall** at isolated places over Tamil Nadu, Puducherry, Himachal Pradesh, West Madhya Pradesh, Meghalaya; **Heavy rainfall** at isolated places over Uttarakhand, Punjab, Haryana, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Konkan & Goa, Madhya Maharashtra, Rayalaseema.

**Weather Systems**

- ✓ The **cyclonic circulation** over southeast Uttar Pradesh extending upto middle & upper tropospheric levels. The cyclonic circulation over south Jharkhand & neighbourhood has merged with the above cyclonic circulation.
- ✓ Another cyclonic circulation lies over northeast Rajasthan & neighbourhood extending upto middle tropospheric levels tilting southwestwards with height.
- ✓ A trough runs from South Interior Karnataka to Comorin area in lower tropospheric levels.
- ✓ The **Monsoon trough** is near its normal position at mean sea level. It is likely to continue to be so during next 4-5 days.
- ✓ An off-Shore trough at mean sea level runs along Maharashtra-Karnataka coasts.

**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 with isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, Rajasthan, East Uttar Pradesh during 10<sup>th</sup> -16<sup>th</sup>; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Uttar Pradesh on 10<sup>th</sup>, 11<sup>th</sup> & during 14<sup>th</sup> – 16<sup>th</sup>; Punjab on 10<sup>th</sup> & 11<sup>th</sup>; Haryana-Chandigarh during 10<sup>th</sup>, 11<sup>th</sup> & 14<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also likely over Himachal Pradesh on 10<sup>th</sup>; Uttarakhand on 10<sup>th</sup> & 11<sup>th</sup>; East Rajasthan during 10<sup>th</sup> – 14<sup>th</sup> August.

#### ❖ **West & Central India**

- ✓ Fairly widespread to widespread light/moderate rainfall with isolated **Heavy rainfall** very over Chhattisgarh, Gujarat Region on 10<sup>th</sup>; East Madhya Pradesh on 10<sup>th</sup> & 11<sup>th</sup>; Konkan & Goa, Madhya Maharashtra on 10<sup>th</sup> & 11<sup>th</sup> August.
- ✓ **Very heavy rainfall** also very likely at isolated places over West Madhya Pradesh on 10<sup>th</sup> August.

#### ❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light/moderate rainfall with isolated **heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 10<sup>th</sup> – 16<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim on 10<sup>th</sup>, 15<sup>th</sup> & 16<sup>th</sup>; Gangetic West Bengal, Jharkhand, Odisha during 14<sup>th</sup> – 16<sup>th</sup>; Bihar during 10<sup>th</sup>-13<sup>th</sup> August.
- ✓ **Very heavy rainfall** also very likely at isolated places over Arunachal Pradesh on 10<sup>th</sup> & 15<sup>th</sup>; Meghalaya on 10<sup>th</sup>; Assam & Meghalaya on 10<sup>th</sup>, 11<sup>th</sup>, 15<sup>th</sup> & 16<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 11<sup>th</sup> & 14<sup>th</sup>, Bihar on 11<sup>th</sup> August.

#### ❖ **South Peninsular India:**

- ✓ Scattered to fairly widespread light to moderate rainfall with isolated **Heavy rainfall** very likely over Tamil Nadu, Kerala & Mahe during 10<sup>th</sup> – 14<sup>th</sup>; Rayalaseema on 14<sup>th</sup> & 15<sup>th</sup>; South Interior Karnataka on 10<sup>th</sup> August.
- ✓ Isolated **very heavy rainfall** also very likely over Tamil Nadu, Kerala & Mahe during 11<sup>th</sup> – 13<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)

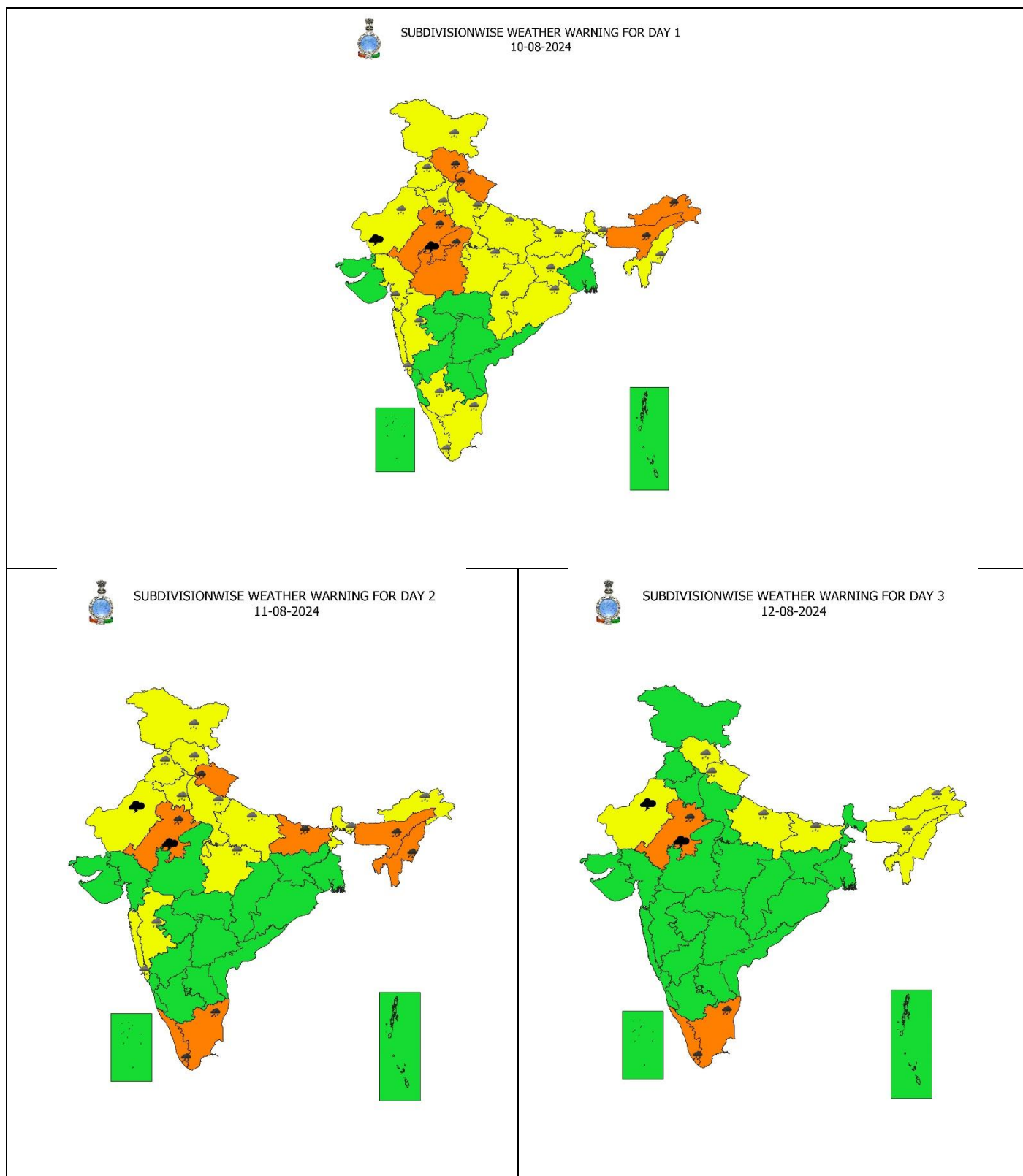
**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 10.08.2024(in cm):**

- ❖ **Tamil Nadu:** Puducherry 15;Tozhudur (dist Cuddalore) 14; Yercaud (dist Salem) 12; Veeraganoor (dist Salem), Sendurai (dist Ariyalur), Senthurai ARG (dist Ariyalur), Penucondapuram (dist Krishnagiri) 11 each;Uthangarai (dist Krishnagiri), Chengam (dist Tiruvannamalai) 10 each;
- ❖ **Meghalaya:** Mawsynram (Dist East Khasi Hills) 15, Cherrapunji(Rkm) ((Dist East Khasi Hills) 11;
- ❖ **Himachal Pradesh:** Nahan (dist Sirmaur) 17, Nagrota Surian (dist Kangra) 9,
- ❖ **West Madhya Pradesh:** Chachoda (dist Guna) 12, Sheopur-aws (dist Sheopur) 10, Badoda (dist Sheopur) 6,
- ❖ **Bihar:** Barun (dist Aurangabad) 9, Thakurganj (dist Kishanganj) 9, Rajauli (dist Nawada) 7, Pothia (dist Kishanganj) 7, Karai Parsurai (dist Nalanda) 7, Shahpur (dist Bhojpur) 7, Indrapuri (dist Rohtas) 7, Taibpur (dist Kishanganj) 7,
- ❖ **East Uttar Pradesh:** Jalalpur Fmo (dist Ambedkar Nagar) 9, Kakardharighat (dist Shrawasti) 9, Bara (dist Prayagraj) 8, Domeriaganj (dist Siddharth Nagar) 7, Rae Bareli Cwc (dist Rae Bareilly) 7, Birdghat (dist Gorakhpur) 7, Ramnagar (dist Barabanki) 7, Mankapur (dist Gonda) 7, Tanda (dist Ambedkar Nagar) 7,
- ❖ **Jharkhand:** Naudiha Bazar (dist Palamu) 9, Chandwa (dist Latehar) 7,
- ❖ **Chhattisgarh:** Kotadol (dist Manendragarh Bharatpur) 9, Rajpur (dist Balrampur) 8, Doura Kochali (dist Balrampur) 8, Shankargarh (dist Balrampur) 8, Chalgali (dist Balrampur) 7,
- ❖ **Haryana:** Barara (dist Ambala) 8, Bawal (dist Rewari) 7, Kurukshetra (dist Kurukshetra) 7, Ambala Cantt (dist Ambala) 7,
- ❖ **Punjab:** Patiala (dist Patiala) 8, Patiala Aws (dist Patiala) 7,
- ❖ **East Madhya Pradesh:** Mauganj (dist Rewa) 8, Kusmi (dist Sidhi) 8, Bahri (dist Sidhi) 7, Churhat (dist Sidhi) 7, Naigarhi (dist Rewa) 7, Gudh (dist Rewa) 7, Prithvipur (dist Niwari) 7,
- ❖ **Punjab:** Patiala (dist Patiala) 8, Patiala Aws (dist Patiala) 7,
- ❖ **Rajalaseema:** Punganur (dist Chittoor) 7,
- ❖ **Uttarakhand:** Haripur(Dehradun) 7, Karnprayag(Chamoli) 6,
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Mathabhanga (dist Cooch Behar) 7,
- ❖ **Konkan & Goa:** Poladpur (dist Raigad) 7,
- ❖ **West Uttar Pradesh:** Sahawar (dist Kasganj) 7,
- ❖ **Odisha:** Laikera (dist Jharsuguda) 7,

## Annexure II

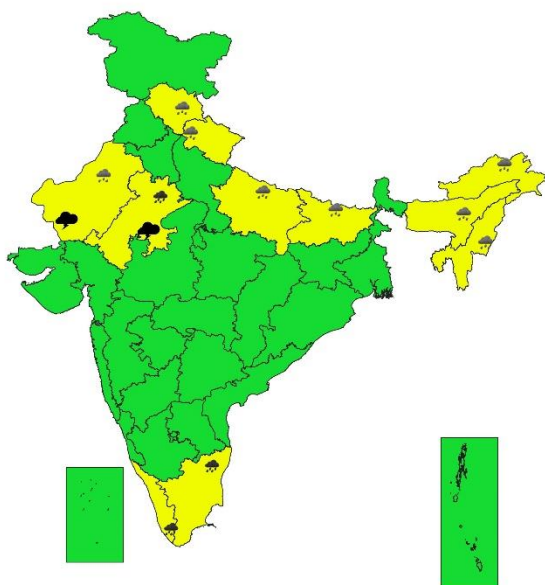
7 Days Rainfall Forecast								
S. No.	Subdivision	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	FWS	FWS	FWS	FWS	WS
2	ARUNACHAL PRADESH	WS	FWS	FWS	FWS	FWS	WS	WS
3	ASSAM & MEGHALAYA	WS	WS	FWS	FWS	WS	WS	WS
4	NAGALAND, MANIPUR,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

- As the lead period increases forecast accuracy decreases.

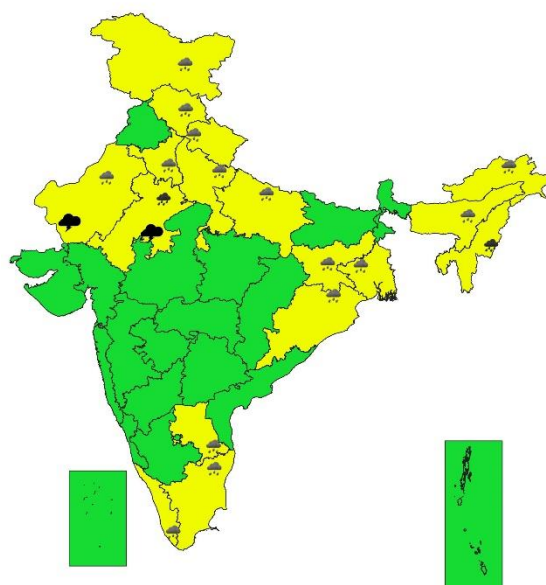




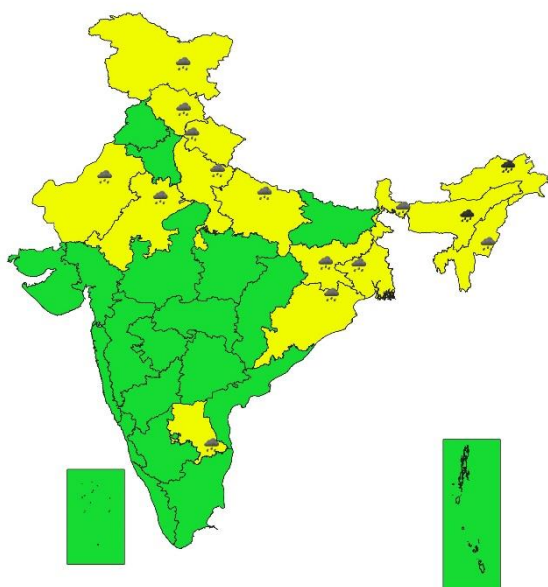
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
13-08-2024



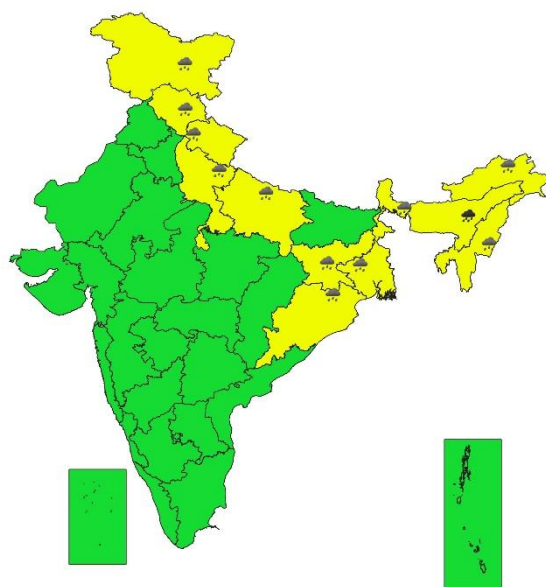
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
14-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 6  
15-08-2024



SUBDIVISIONWISE WEATHER WARNING FOR DAY 7  
16-08-2024



- 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 Himachal Pradesh, West Madhya Pradesh, Meghalaya on 10<sup>th</sup>; Uttarakhand on 10<sup>th</sup> & 11<sup>th</sup>; East Rajasthan during 10<sup>th</sup> – 14<sup>th</sup>; Arunachal Pradesh on 10<sup>th</sup> & 15<sup>th</sup>; Assam & Meghalaya on 10<sup>th</sup>, 11<sup>th</sup>, 15<sup>th</sup> & 16<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 11<sup>th</sup> & 14<sup>th</sup>, Bihar on 11<sup>th</sup>; Tamil Nadu, Kerala & Mahe during 11<sup>th</sup> – 13<sup>th</sup> August.
- **Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand Met Sub-divisions on 10<sup>th</sup> & 11<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 kutch 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, Assam & Meghalaya, Sub-Himalayan West Bengal, Bihar, Himachal Pradesh, Haryana, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Konkan & Goa, Madhya Maharashtra (ghat areas) and Tamil Nadu.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in NMMT, Odisha, Uttarakhand, Punjab, West Uttar Pradesh, West Rajasthan and Kerala.
- 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 Assam, postpone sowing of sesame, green gram and black gram.
- In Meghalaya, withhold sowing of cowpea and millets.



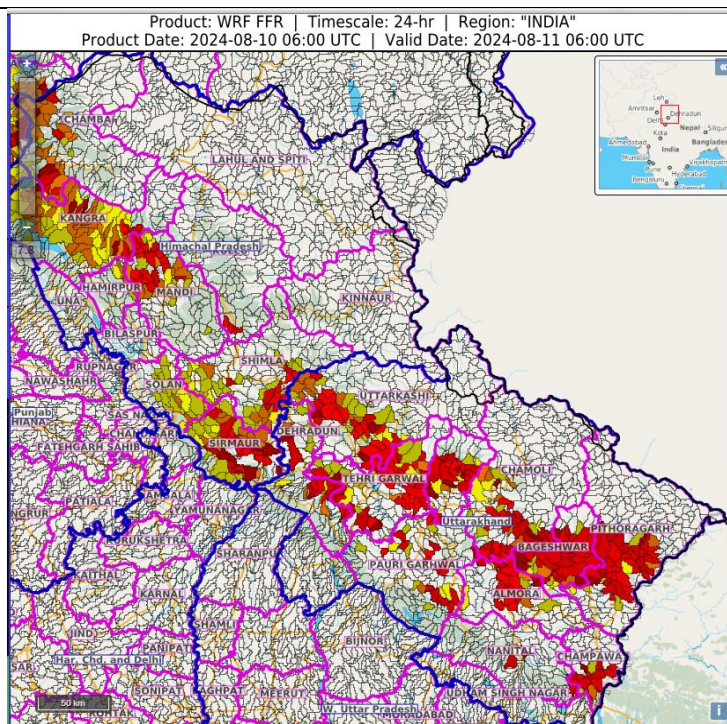
**Flash Flood Guidance:**

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 11-08-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh - Chamba, Kangra, Mandi, Shimla and Sirmaur districts.

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





### 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

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

### Probabilistic Forecast

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

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