



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

Press Release.

Date: 13th August, 2023

Time of Issue: 1330 hours IST

- Subject:** i) Isolated extremely heavy rainfall likely over Uttarakhand during next 02 days and decrease thereafter.
ii) Isolated heavy rainfall likely over Himachal Pradesh, Punjab, Haryana, Chandigarh, Uttar Pradesh, Bihar, Sub Himalayan West Bengal & Sikkim next 2 days. Isolated heavy rainfall likely to continue over northeast India during next 5 days.
iii) Increase in rainfall activity over East and central India from 16th August, 2023.

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

Significant Weather features:

- ❖ The Monsoon Trough lies north of its normal position. It is likely to be north of its normal position or along the foothills of Himalayas during next 4-5 days and gradual shifts southwards towards its normal position thereafter.
- ❖ A cyclonic circulation lies over East Bangladesh & neighbourhood with trough aloft roughly along Long. 90°E to the north of Lat. 20°N in lower tropospheric levels.
- ❖ The Western Disturbance as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 75°E to the north of Lat. 32°N

Weather Forecast and Warnings: (Annexure II)

Northwest India: Light/moderate scattered to fairly widespread rainfall with isolated **heavy rainfall** likely over Himachal Pradesh on 13th & 14th; over Uttarakhand during 13th to 17th; over Punjab & Haryana, West Uttar Pradesh on 13th & 14th; over East Uttar Pradesh on 13th August, 2023.

Isolated **very heavy rainfall** activity very likely over Himachal Pradesh on 13th; over Uttar Pradesh on 13th August.

Isolated extremely heavy falls also likely over Uttarakhand on 13th & 14th August.

East India: Light/moderate scattered to fairly widespread rainfall with **isolated heavy rainfall** activity very likely over Sub-Himalayan West Bengal & Sikkim during 13th-15th August; over Bihar on 13th; over Gangetic West Bengal on 16th & 17th; over Odisha and Jharkhand during 15th to 17th and over Andaman & Nicobar Islands during 14th -16th August.

Isolated **very heavy rainfall** likely over Sub-Himalaya West Bengal & Sikkim on 13th August.

Northeast India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall**

activity very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 13th to 17th August.

Isolated **very heavy rainfall** over Assam & Meghalaya on 13th August.

Central, West & South India: Light/moderate isolated to scattered rainfall with isolated **heavy rainfall** activity very likely over East Madhya Pradesh and Chhattisgarh on 16th & 17th August.

Subdued rainfall activity likely over remaining parts of these regions during next 7 days.

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

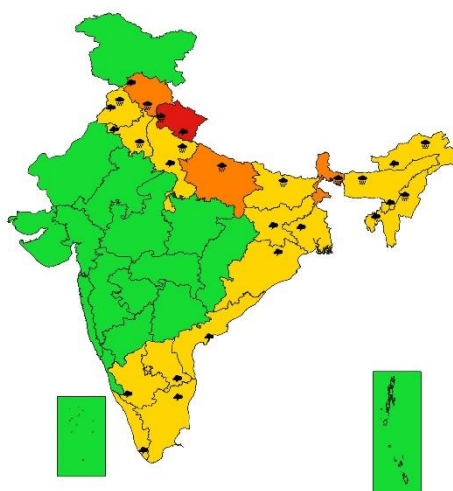
Annexure I

Rainfall Observations: (from 0830 hours IST of yesterday to 0830 hours IST of today, the 13th August, 2023):

- **Heavy to very heavy rainfall with extremely heavy fall** at isolated places over Assam & Meghalaya; **Heavy to very heavy rainfall** at isolated places over Himachal Pradesh and **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, East Uttar Pradesh, Arunachal Pradesh, Bihar, Nagaland, Manipur, Mizoram & Tripura, Odisha, Tamil Nadu.
- **Significant rainfall recorded (in cm):**
 - ✓ **Assam & Meghalaya:** Mawsynram (dist East Khasi Hills) 31, Barpeta (dist Barpeta) 23, Mawkyrwat (dist South West Khasi Hills) 22, Cherrapunji(rkm) (dist East Khasi Hills) 21, Cherrapunji (dist East Khasi Hills) 19, Beky Rly.bridge (dist Barpeta) 19, Barpeta/sarbhog. (dist Barpeta) 17, Hazuah (dist Barpeta) 15, Dhubri_imd (dist Dhubri) 15, Dhubri (dist Dhubri) 12, Panbari (dist Chirang) 11, Barpeta . (dist Barpeta) 10, Tura Kvk (dist West Garo Hills) 10, Shella (dist East Khasi Hills) 10, Bhaghmara (dist South Garo Hills) 10, Tikrikil (dist West Garo Hills) 9, Beki Mathungari (dist Barpeta) 8;
 - ✓ **Himachal Pradesh:** Sundarnagar (dist Mandi) 17, Sujanpur Tira (dist Hamirpur) 15, Gohar (dist Mandi) 13, Kahu (dist Bilaspur) 12, Mandi (dist Mandi) 12, Dharmasala (dist Kangra) 9, Berthin Agro (dist Bilaspur) 8, Barthin (dist Bilaspur) 8, Baldwara (dist Mandi) 8, Nadaun (dist Hamirpur) 7, Palampur (dist Kangra) 7, Karsog (dist Mandi) 7;
 - ✓ **Arunachal Pradesh:** Pasighat_ Aero (dist East Siang) 10, Roing (dist Lower Dibang Valley) 7;
 - ✓ **Bihar:** Lalbegiaghat (dist East Champaran) 10, Sugauli (dist East Champaran) 8, Bettiah (dist West Champaran) 8, Dhengbridge (dist Sitamarhi) 8, Patahi (dist East Champaran) 8, Sheohar (dist Sheohar) 7, Motihari (dist East Champaran) 7, Taibpur (dist Kishanganj) 7;
 - ✓ **Nagaland, Manipur, Mizoram & Tripura:** Senapati (dist Senapati) 9;
 - ✓ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Reasi (dist Reasi) 9, Burmal (dist Kathua) 8, Katra (dist Reasi) 6;
 - ✓ **Punjab:** Shahpur Kandi (dist Pathankot) 9;
 - ✓ **East Uttar Pradesh:** Katarniaghat 9 Kakerdarighat 7;
 - ✓ **Odisha:** Balasore (dist Balasore) 7, Birmaharajpur (dist Sonepur) 7;
 - ✓ **Tamil Nadu:** Sattur (dist Virudhunagar, Chembarabakkam (dist Kancheepuram) 7 each;



SUBDIVISIONWISE WEATHER WARNING FOR DAY 1 (13-8-2023)



Subdivision Warning

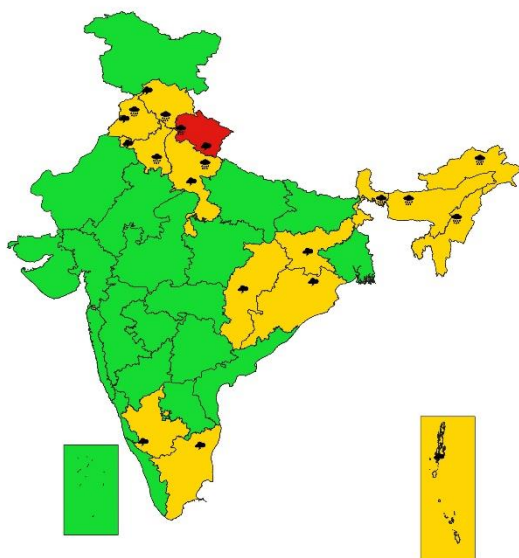
- ☁ Heavy Rain
- ❄ Heavy Snow
- ⚡ Thunderstorms & Lightning
- 🌪️ Hailstorm
- 🌪️ Dust Storm
- 🌪️ Strong Surface Winds
- 🔥 Heat Wave
- ❄ Cold wave
- 🌫️ Fog

Subdivision color

- 🟢 NO WARNING
- 🟡 WATCH (BE UPDATED)
- 🟠 ALERT (BE PREPARED)
- 🔴 WARNING (TAKE ACTION)



SUBDIVISIONWISE WEATHER WARNING FOR DAY 2 (14-8-2023)



Subdivision Warning

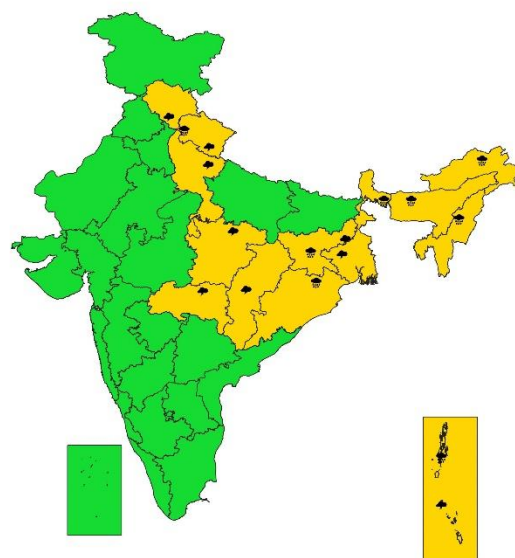
- ☁ Heavy Rain
- ❄ Heavy Snow
- ⚡ Thunderstorms & Lightning
- 🌪️ Hailstorm
- 🌪️ Dust Storm
- 🌪️ Strong Surface Winds
- 🔥 Heat Wave
- ❄ Cold wave
- 🌫️ Fog

Subdivision color

- 🟢 NO WARNING
- 🟡 WATCH (BE UPDATED)
- 🟠 ALERT (BE PREPARED)
- 🔴 WARNING (TAKE ACTION)



SUBDIVISIONWISE WEATHER WARNING FOR DAY 3 (15-8-2023)

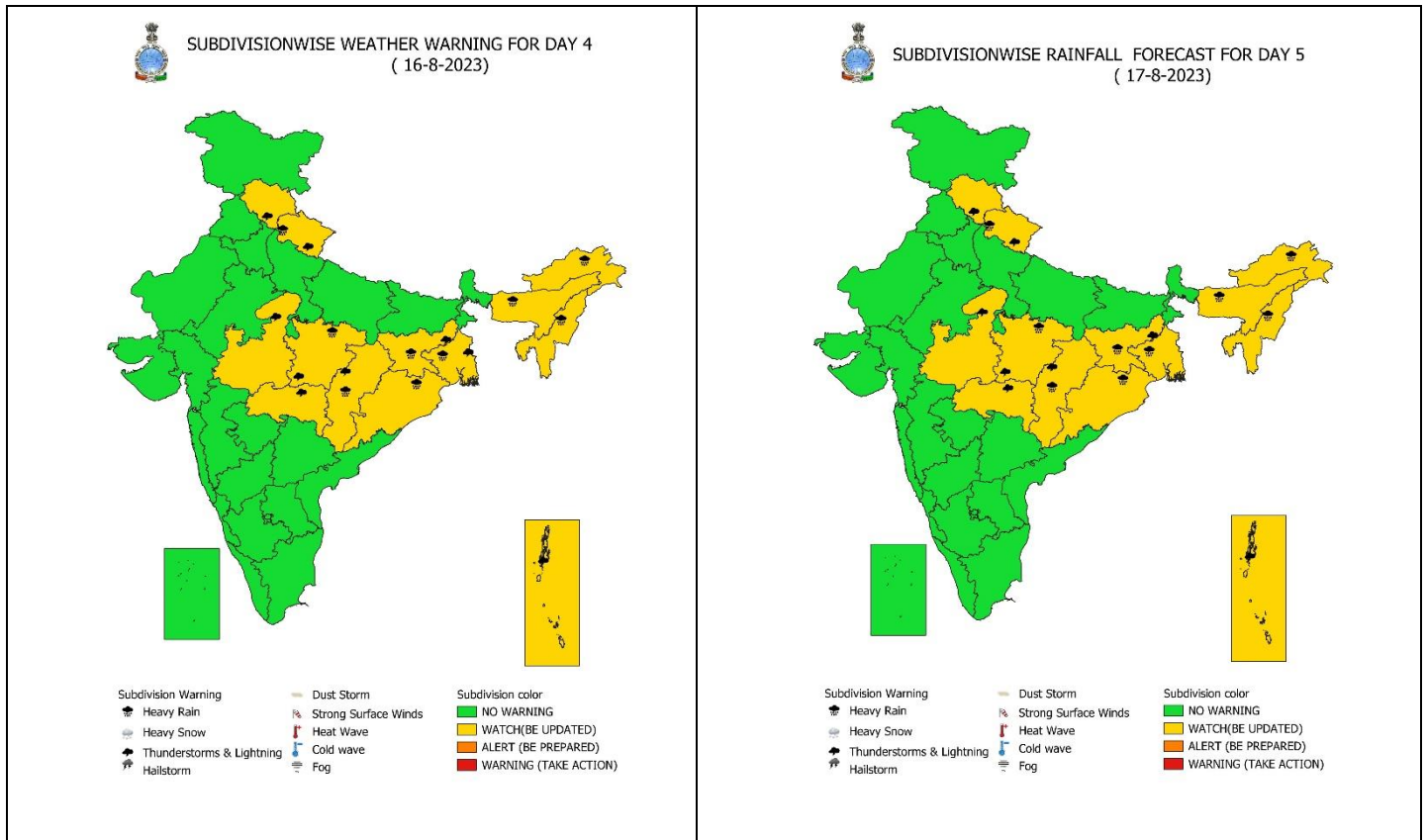


Subdivision Warning

- ☁ 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/extremely heavy rainfall over:

1. Uttarakhand during 13th-14th August;
2. Himachal Pradesh, East Uttar Pradesh, Sub-Himalaya West Bengal & Sikkim, Assam & Meghalaya on 13th August.

A. Impact Expected

- ❖ 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 in the hilly areas.
- ❖ 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).

B. Action Suggested

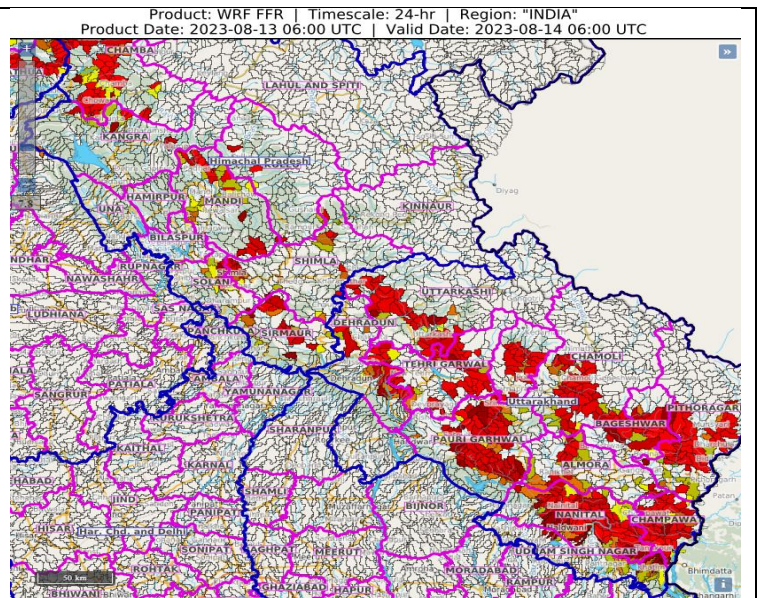
- ❖ Check for traffic congestion on your route before leaving for your destination.
- ❖ Follow any traffic advisories that are issued in this regard.
- ❖ Avoid going to areas that face the water logging problems often.
- ❖ Avoid staying in vulnerable structure.

Annexure III

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 14-08-2023 :

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

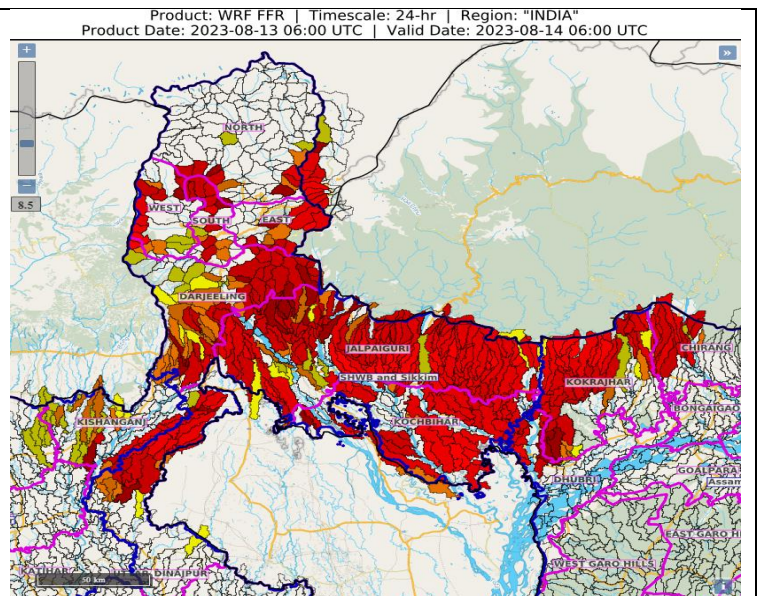
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 14-08-2023 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of **Sub-Himalaya West Bengal & Sikkim** and adjoining **Assam & Meghalaya** 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.
- ❖ **Obsy:** Observatory; **∴** 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)