



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

**Press Release
Date: 19th September, 2023
Time of Issue: 1300 hours IST**

**Subject: 1) A Low Pressure Area has formed over Northwest Bay of Bengal off West Bengal-Odisha coasts. It is likely to move west-northwestwards across North Odisha & South Jharkhand during next 2 days. Under its influence, heavy to very heavy rainfall likely over East India during next 3 days.
2) Isolated extremely heavy rainfall very likely to continue over Saurashtra & Kutch today, the 19 Sept and decrease thereafter.**

**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:

- ❖ Under the influence of the cyclonic circulation over Northwest & adjoining Central Bay of Bengal, a **Low Pressure Area has formed over Northwest Bay of Bengal off West Bengal-Odisha coasts**. Associated cyclonic circulation extends upto middle tropospheric levels tilting southwest-wards with height. It is likely to move west-northwestwards across North Odisha & South Jharkhand during next 2 days.
- ❖ A cyclonic circulation lies over southwest Rajasthan and extends upto middle tropospheric levels.
- ❖ The Monsoon Trough lies south to its normal position and passes through Jaisalmer, Kota, Guna, Siddhi, Ranchi and the centre of **Low Pressure Area** over Northwest Bay of Bengal off West Bengal-Odisha coasts and thence southeastwards to Eastcentral Bay of Bengal.

Weather Forecast and Warnings: (Annexure II)

West India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy to very heavy rainfall** very likely over Gujarat state, north Konkan and ghat areas of Madhya Maharashtra on 19th September.

❖ **Isolated extremely heavy rainfall very likely over Saurashtra & Kutch on 19th September.**

East India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Gangetic West Bengal, Odisha, Jharkhand during 19th-22nd; Sub-Himalayan West Bengal & Sikkim during 20th-22nd and Bihar during 21st-23rd September.

Isolated very heavy rainfall very likely over Odisha during 19th-21st September.

Northwest India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy falls** very likely over Punjab and Himachal Pradesh on 19th September.

Northeast India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy rainfall** activity very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 19th-23rd and over Arunachal Pradesh during 20th-23rd September.

Isolated very heavy rainfall very likely over Nagaland, Manipur on 20th & 21st and over Arunachal Pradesh, Assam, Meghalaya on 21st & 22nd September.

Central India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Chhattisgarh during 19th-22nd; East Madhya Pradesh during 21st-23rd; Vidarbha and West Madhya Pradesh on 22nd & 23rd September.

South India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Coastal Andhra Pradesh on 19th & 20th and interior Tamil Nadu, Kerala on 19th September.

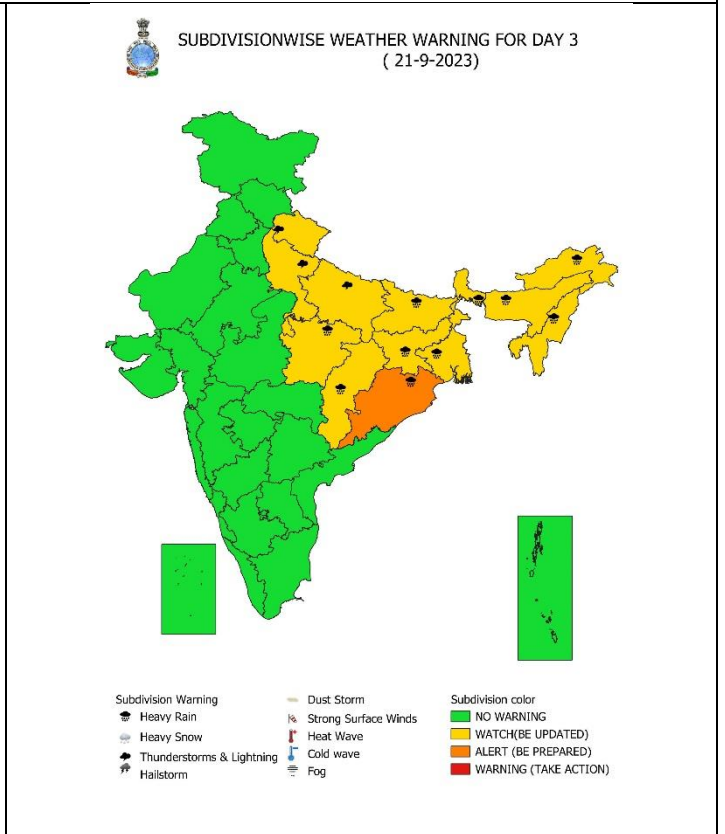
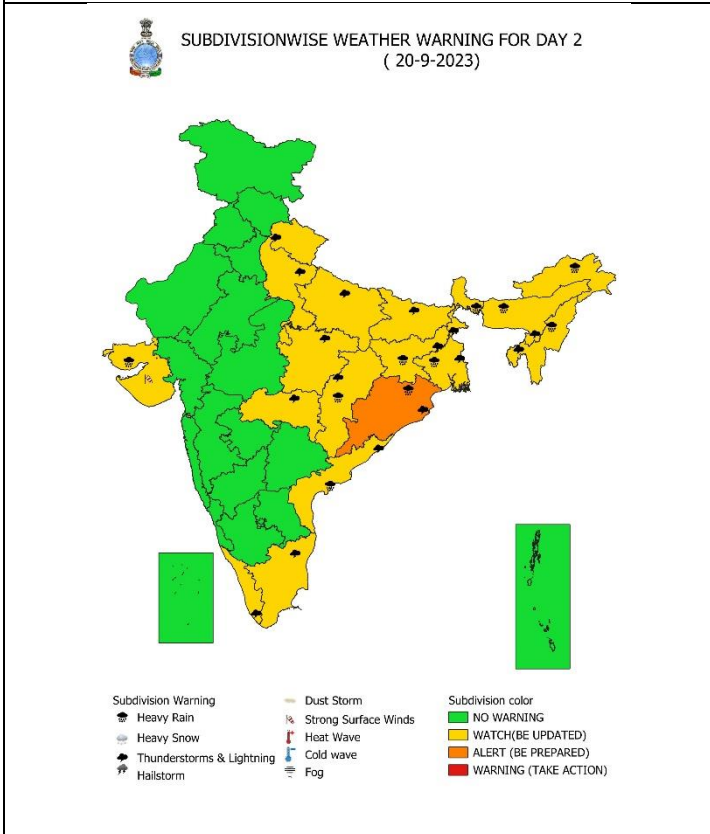
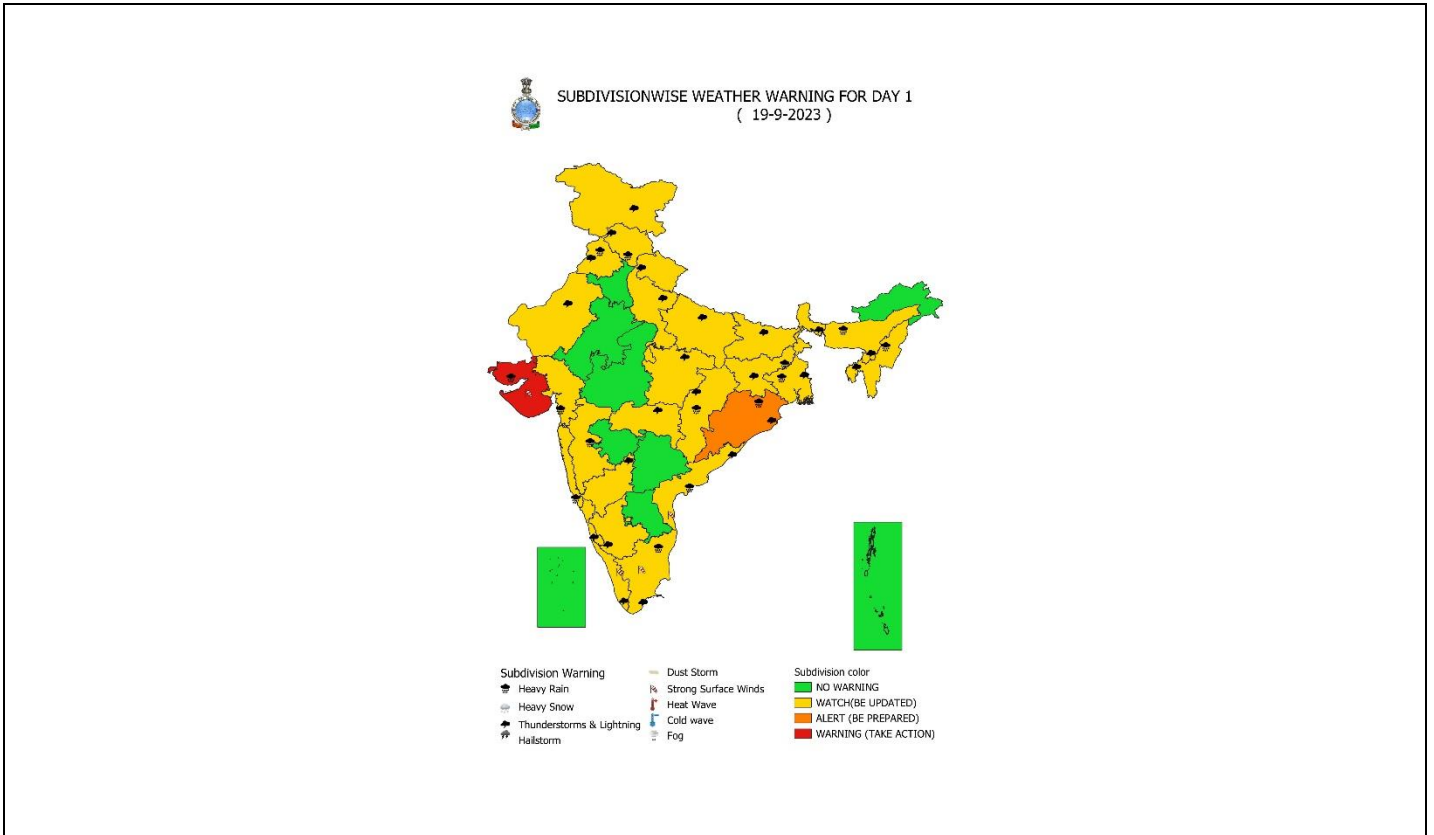
For more details kindly refer:

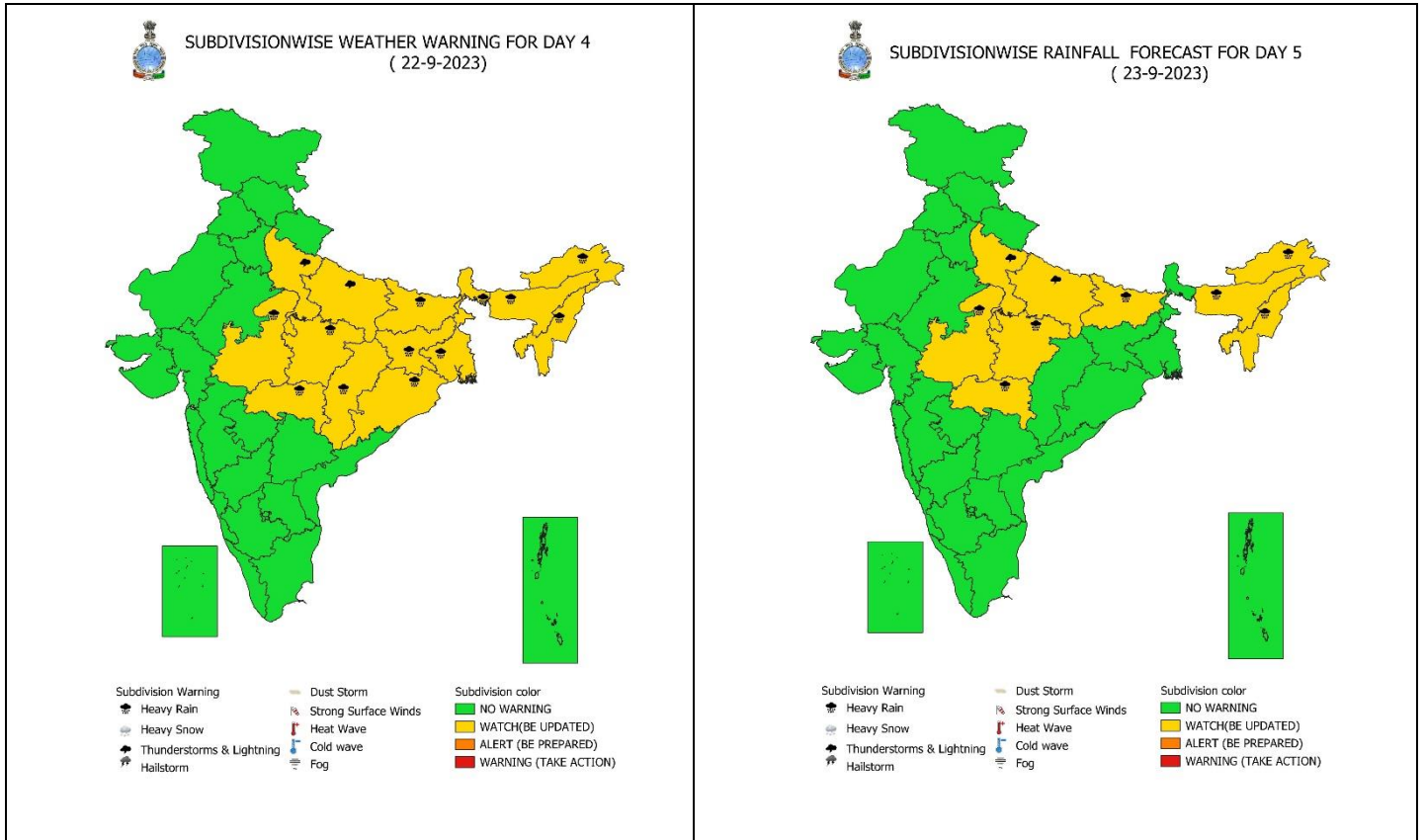
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Rainfall observations: (from 0830 hours IST of yesterday to 0830 hours IST of today, the 19th September, 2023):

- **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Saurashtra; **Heavy to very heavy rainfall** at isolated places over Gujarat region, Himachal Pradesh and **heavy rainfall** at isolated places over Jammu, Punjab, north Konkan, Madhya Maharashtra, southwest Rajasthan, Chhattisgarh, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Mizoram, Tripura, Tamil Nadu and Kerala.
- **Significant rainfall recorded (in cm):**
 - ✓ **Saurashtra & Kutch:** Visavadar (dist Junagadh) 30, Mendarda (dist Junagadh) 19, Vanthali (dist Junagadh) 15, Bagasra (dist Amreli) 11, Junagadh (dist Junagadh) 11, Rapar (dist Kutch) 10, Dhrangadhra (dist Surendranagar) 9, Kodinar (dist Gir Somnath) 9, Malia (dist Junagadh) 8, Halvad (dist Morbi) 8, Talala (dist Gir Somnath) 7, Bhesan (dist Junagadh) 7,
 - ✓ **Gujarat Region:** Radhanpur (dist Patan) 19, Becharaji (dist Mehsana) 17, Bhabhar (dist Banaskantha) 17, Mahesana (dist Mehsana) 16, Deodar (dist Banaskantha) 11, Deesa (dist Banaskantha) 11, Visnagar (dist Mehsana) 10, Vijapur (dist Mehsana) 10, Dharoi Colony (dist Mehsana) 9, Tharad (dist Banaskantha) 9, Vadgam (dist Banaskantha) 9, Idar (dist Sabarkantha) 9, Satlasana (dist Mehsana) 9, Chanasma (dist Patan) 8, Danta (dist Banaskantha) 8, Kheralu (dist Mehsana) 8, Sami (dist Patan) 8, Palsana (dist Surat) 8, Sojitra (dist Anand) 8, Harij (dist Patan) 8, Vadnagar (dist Mehsana) 7, Poshina (dist Sabarkantha) 7, Jotana (dist Mehsana) 7, Chikhli (dist Navsari) 7, Amirgadh (dist Banaskantha) 7, Santalpur (dist Patan) 7,
 - ✓ **Himachal Pradesh:** Gopipur (dist Kangra) 14, Nagrota Surian (dist Kangra) 11, Guler (dist Kangra) 11, Ghamroor (dist Kangra) 7, Nadaun (dist Hamirpur) 7,
 - ✓ **Nagaland, Manipur, Mizoram & Tripura:** Wokha (dist Wokha) 10, Kolasib Agri (dist Kolasib) 9, Kolasib_aws (dist Kolasib) 8, Lengpui (dist Aizawl) 8, Kvk Dhalai (dist Dhalai) 7, Lawngtlai Agri (dist Lawngtlai) 7, Aizwal (dist Aizawl) 7
 - ✓ **Chhattisgarh:** Pendra (dist Bilaspur) 9, Kusmi (dist Balrampur) 8, Pendra Road (dist Bilaspur) 7,
 - ✓ **Tamil Nadu:** Pudukottai (dist Pudukkottai) 9, Pambar Dam (dist Krishnagiri), Maniyachi (dist Toothukudi), Nagudi (dist Pudukkottai), Tiruvadanai (dist Ramanathapuram), Kalial (dist Kanyakumari), Madavaram AWS (dist Tiruvallur), Thirparappu (dist Kanyakumari) 7 each,
 - ✓ **Kerala:** Venkurinji AWS (Pathanamthitta district) 9, Varkala (Thiruvananthapuram district), Ponnani (Malappuram district) & Kalamassery AWS (Ernakulam district) 8 each.
 - ✓ **Konkan:** Vikramgad (dist Palghar) 8, Roha (dist Raigad) 8, Palghar_agri (dist Palghar) 7,
 - ✓ **Madhya Maharashtra:** Igatpuri (dist Nashik) 9, Mahabaleshwar- Imd Obsy (dist Satara) 5,
 - ✓ **West Rajasthan:** Sinderi Sr (dist Barmer) 8,
 - ✓ **Gangetic West Bengal:** PANSKURA- 7,
 - ✓ **Punjab:** Mukerian (dist Hoshiarpur) 7, Tibri (dist Gurdaspur) 7, Gurudaspur (dist Gurdaspur) 7,
 - ✓ **Jammu:** Banihal-7
 - ✓ **Odisha:** Jhumpura (dist Keonjhar) 7,
 - ✓ **Assam:** Dudhnoi Arg (dist Goalpara) 7

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





Impact & Action Suggested due to very heavy rainfall/extremely heavy falls over Saurashtra & Kutch on 19th and over Odisha during 19th-21st 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.

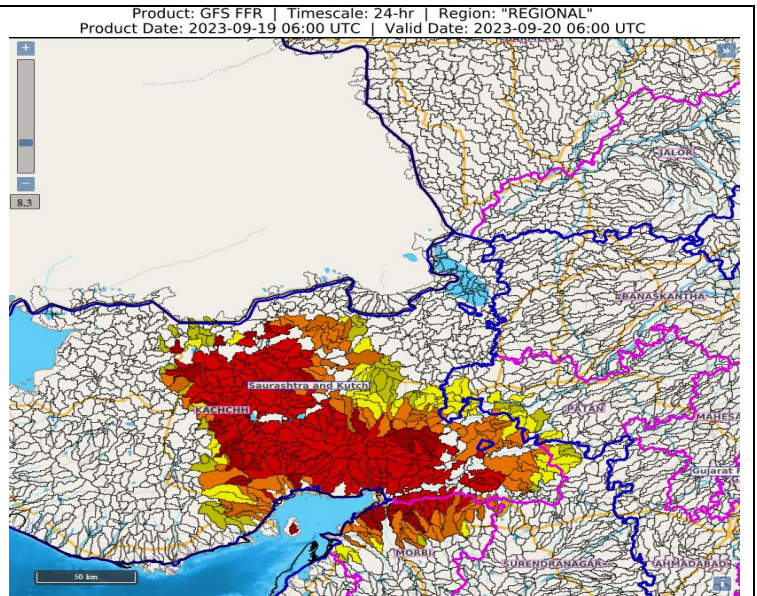
Action suggested:

- 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 20-09-2023 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of Saurashtra & Kutch adjoining Gujarat Region 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)