



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

**Press Release
Date: 18th September, 2023
Time of Issue: 1245 hours IST**

**Subject: 1) Isolated extremely heavy rainfall very likely over Gujarat state and very heavy rainfall over south Rajasthan today and decrease thereafter.
2) A fresh spell of rainfall/thunderstorm likely over East India from 20th September, 2023.**

**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 Low-Pressure Area over Southeast Rajasthan & neighbourhood has become less marked. However, the associated cyclonic circulation now lies over East Rajasthan & neighbourhood in lower & middle tropospheric levels. A trough runs from this cyclonic circulation to northeast Arabian Sea in lower tropospheric levels.
- ❖ Another cyclonic circulation lies over Northeast & adjoining Eastcentral Bay of Bengal Sea in lower & middle tropospheric levels. **Under its influence, a Low-Pressure Area likely to form over northwest Bay of Bengal & neighbourhood during next 48 hours.**
- ❖ The Monsoon Trough lies south to its normal position and passes through Jaisalmer, Ajmer, Shivpuri, Sidhi, Daltonganj, Digha and thence southeast to Eastcentral Bay of Bengal.
- ❖ **A Western Disturbance** as a trough in middle tropospheric westerlies runs roughly along Long. 70°E to the north of Lat. 28°N.

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 Region & south Rajasthan on 18th & 19th and north Konkan, north Madhya Maharashtra on 18th September.

❖ **Isolated extremely heavy rainfall very likely over Gujarat state on 18th; very heavy rainfall on 19th and heavy to very heavy rainfall over south Rajasthan on 18th September.**

Northwest India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with **isolated heavy falls** very likely over Jammu division and Himachal Pradesh on 18th September.

East India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim, Jharkhand during 20th-22nd, Gangetic West Bengal on 18th, 21st & 22nd; over Odisha during 18th-21st and Bihar on 21st & 22nd

September.

Isolated very heavy rainfall very likely over Odisha on 20th & 21st 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 18th-22nd and over Arunachal Pradesh during 20th-22nd September.

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

Central India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Chhattisgarh during 20th-22nd September.

South India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over interior Tamil Nadu and Kerala on 18th September.

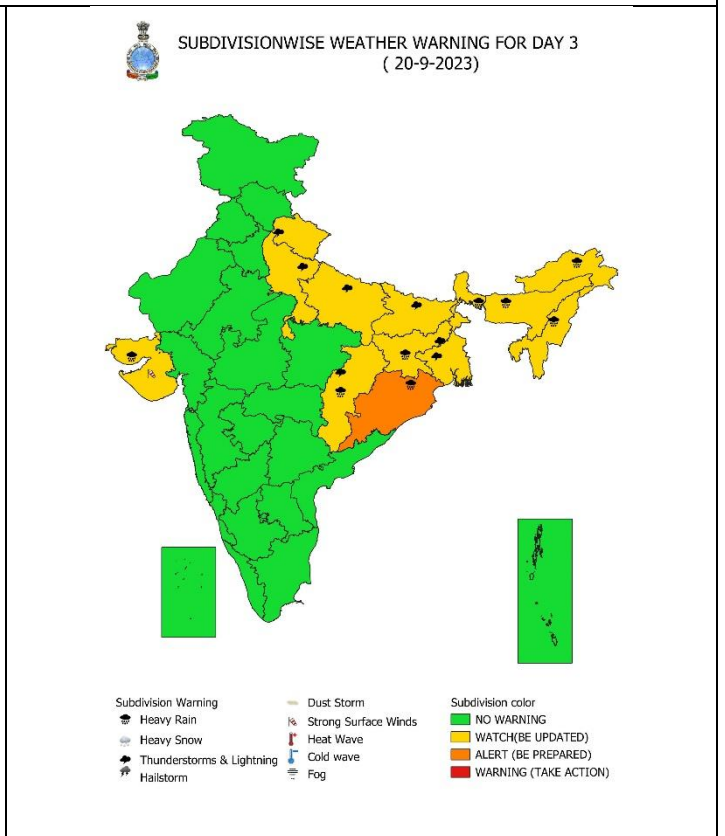
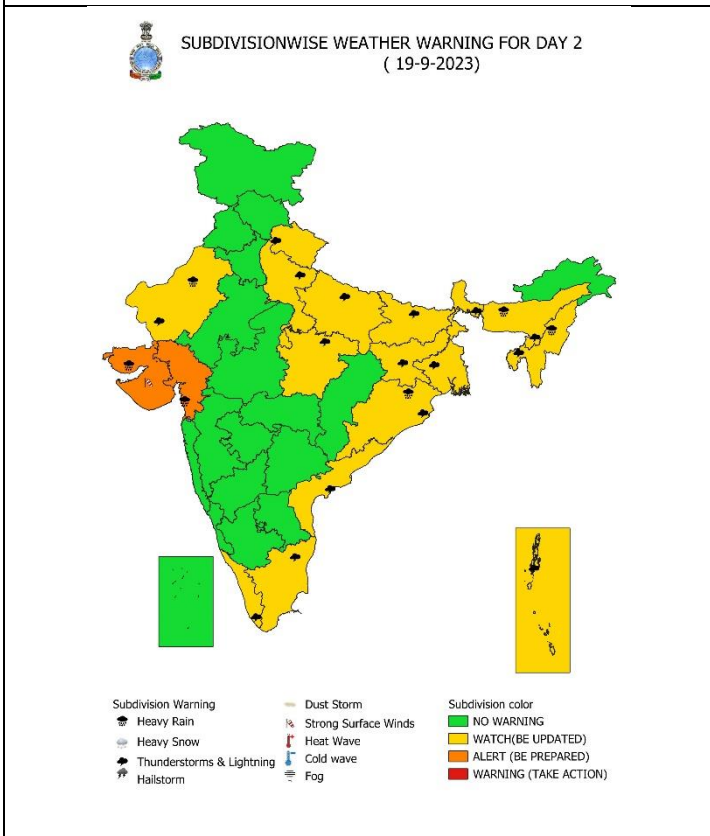
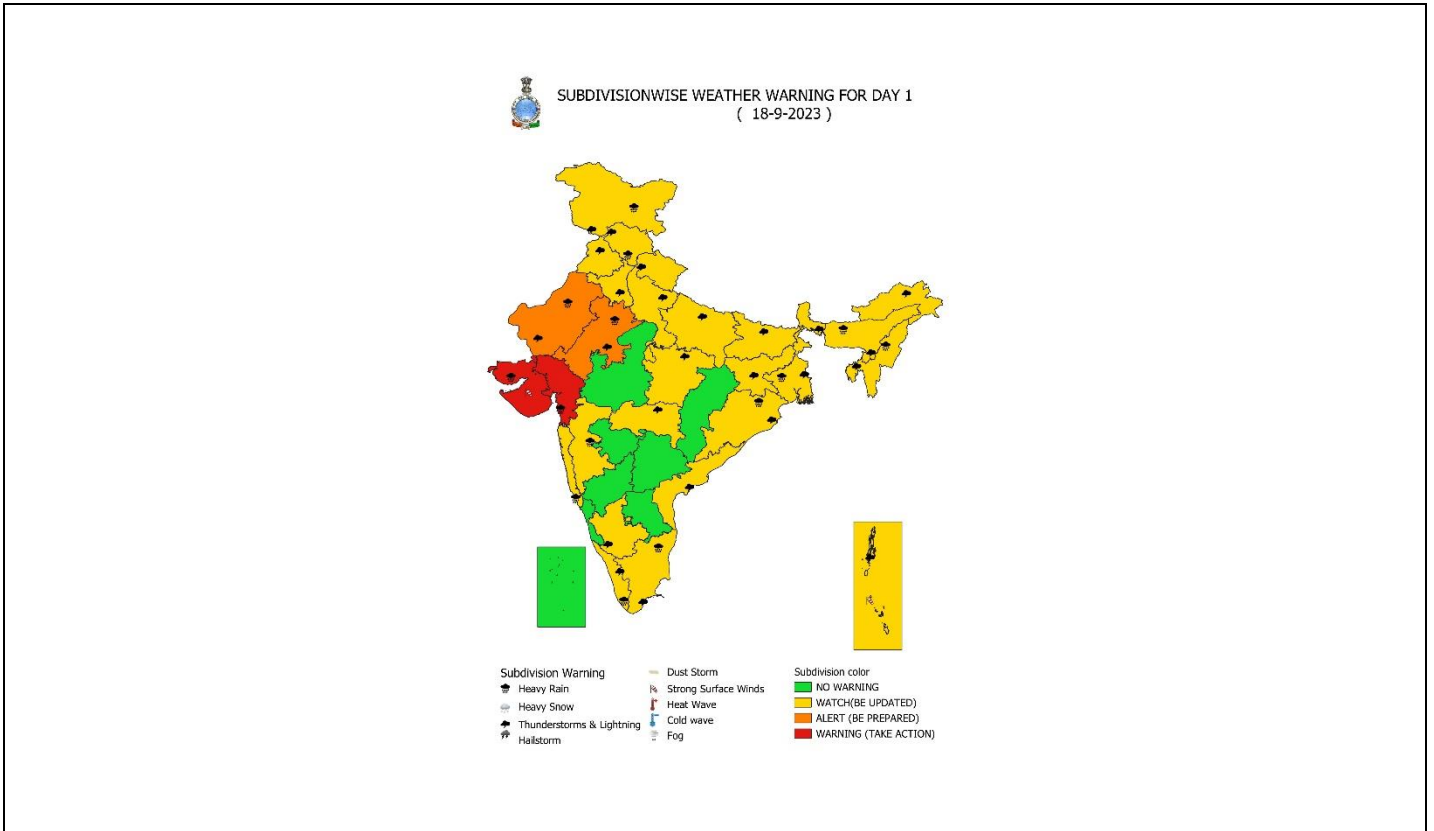
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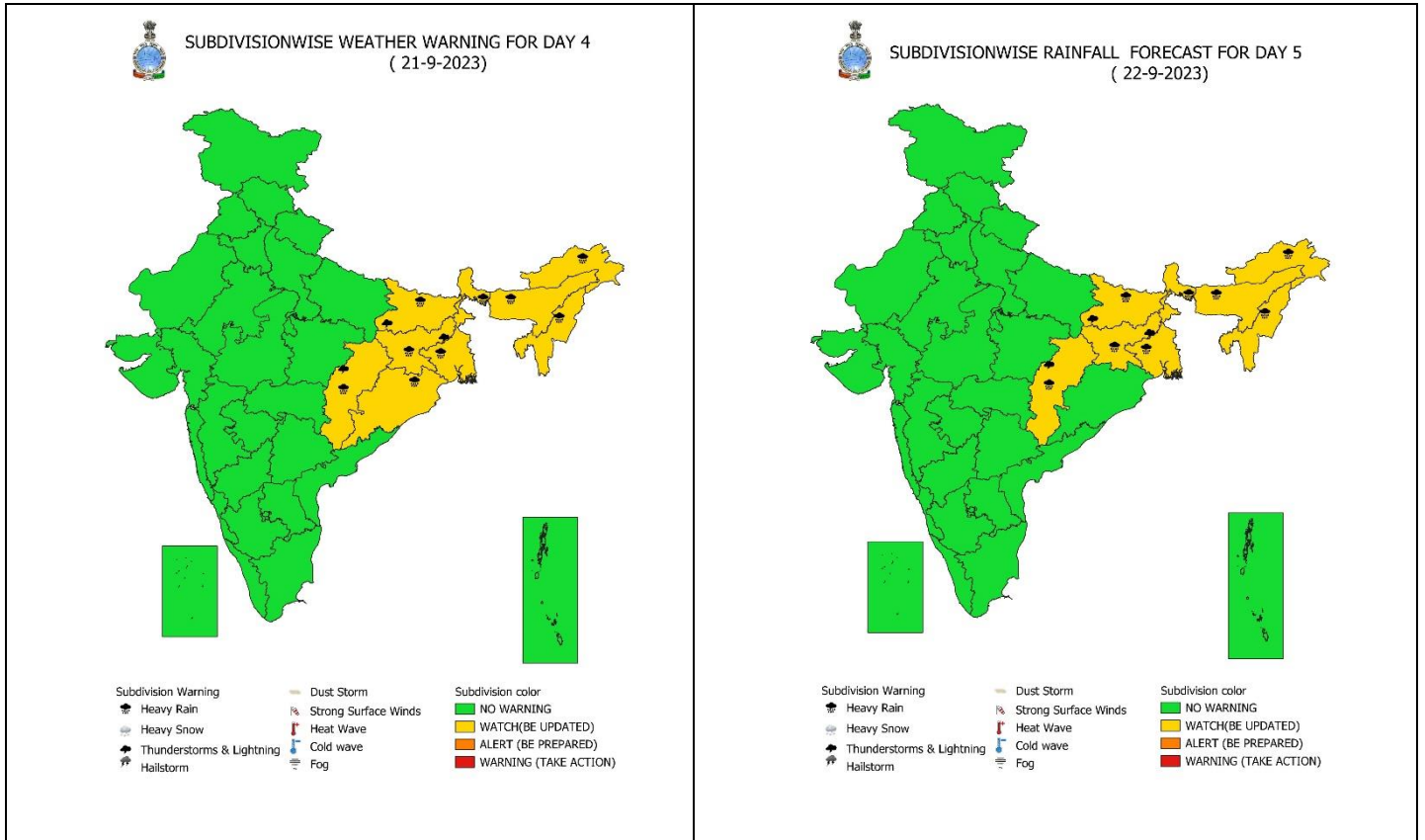
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Rainfall observations: (from 0830 hours IST of yesterday to 0830 hours IST of today, the 18th September, 2023):

- **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over East Rajasthan, Gujarat region; **Heavy to very heavy rainfall** at isolated places over Madhya Pradesh, West Rajasthan, Odisha, Tamil Nadu, Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Jammu, Himachal Pradesh, Punjab, Haryana, Saurashtra, Konkan, Jharkhand, Kerala and Rayalaseema.
- **Significant rainfall recorded (in cm):**
 - ✓ **Gujarat Region:** Godhra (dist Panchmahal) 24, Shahera (dist Panchmahal) 23, Virpur (dist Mahisagar) 23, Talod (dist Sabarkantha) 21, Bayad (dist Aravalli) 21, Dhansura (dist Aravalli) 20, Morva Hadaf (dist Panchmahal) 18, Lunawada (dist Mahisagar) 17, Prantij (dist Sabarkantha) 17, Kapadvanj (dist Kheda) 16, Mahudha (dist Kheda) 15, Limkheda (dist Dahod) 15, Kadi (dist Mehsana) 15, Balasinor (dist Mahisagar) 15, Kathalal (dist Kheda) 14, Wanakbori (dist Mahisagar) 14, Meghraj (dist Aravalli) 13, Mansa (dist Gandhinagar) 13, Nadiad (dist Kheda) 13, Dahegam (dist Gandhinagar) 12, Abad City (dist Ahmedabad) 11, Galteshwar (dist Kheda) 11, Santrampur (dist Mahisagar) 10, Modasa (dist Aravalli) 10, Jambughoda (dist Panchmahal) 9, Desar (dist Vadodara) 9, Singvad (dist Dahod) 9, Umreth (dist Anand) 9, Dhanpur (dist Dahod) 9, Vijaynagar (dist Sabarkantha) 9, Halol (dist Panchmahal) 9, Kadana (dist Mahisagar) 9, Dascroi (dist Ahmedabad) 9, Gandhinagar (dist Gandhinagar) 9, Himatanagar (dist Sabarkantha) 9, Anand (dist Anand) 8, Deesa (dist Banaskantha) 8, Garbada (dist Dahod) 8, Mahemdavad (dist Kheda) 8, Kalol(g) (dist Gandhinagar) 8, Dharoi Colony (dist Mehsana) 8, Khanpur (dist Mahisagar) 8, Jetpur Pavi (dist Chhota Udepur) 8, Patan (dist Patan) 8, Visnagar (dist Mehsana) 8, Jhalod (dist Dahod) 8, Kalol (dist Panchmahal) 8, Sanjeli (dist Dahod) 8, Bhiloda (dist Aravalli) 8, Devgad Baria (dist Dahod) 8, Thasra (dist Kheda) 8, Becharaji (dist Mehsana) 7, Vijapur (dist Mehsana) 7, Khedbrahma (dist Sabarkantha) 7, Dahod (dist Dahod) 7, Matar (dist Kheda) 7, Fatepura (dist Dahod) 7, Savli (dist Vadodara) 7,
 - ✓ **East Rajasthan:** Nithuwa Sr (dist Dungarpur) 21, Pratapgarh (dist Pratapgarh) 16, Mounatabu Tehsil Sr (dist Sirohi) 13, Bhungra Sr (dist Banswara) 12, Jagpura Sr (dist Banswara) 11, Gogunda Sr (dist Udaipur) 11, Dhariabad (dist Pratapgarh) 10, Ghatol (dist Banswara) 10, Salumber (dist Udaipur) 10, Arnod Sr (dist Pratapgarh) 10, Chhotisadri (dist Pratapgarh) 10, Sarara (dist Udaipur) 10, Jhadol Sr (dist Udaipur) 9, Khushalgarh (dist Banswara) 9, Pipalkhunt Sr (dist Pratapgarh) 7
 - ✓ **West Rajasthan:** Pali-20, Ahore Sr (dist Jalore) 10, Desuri (dist Pali) 7,
 - ✓ **Andaman & Nicobar Islnds:** HUTBAY- 15, LONG ISLAND- 10, PORT BLAIR- 9,
 - ✓ **Odisha:** Sundargarh (dist Sundargarh) 13,
 - ✓ **East Madhya Pradesh:** Singrauli-aws (dist Singrauli) 12, Mada (dist Singrauli) 8,
 - ✓ **West Madhya Pradesh:** Bajna (dist Ratlam) 12, Jhabua-aws (dist Jhabua) 10, Thandla (dist Jhabua) 9, Kathiwada (dist Alirajpur) 9, Meghnagar (dist Jhabua) 8, Petlawad (dist Jhabua) 7, Sailana (dist Ratlam) 7,
 - ✓ **Himachal Pradesh:** R L Bbmb (dist Bilaspur) 11, Chuari (dist Chamba) 6,
 - ✓ **Tamil Nadu:** Pambar Dam-13, Tiruvannamalai, Krishnagiri, Kallakurichi-12 each, Tiruchirapalli-11, Harur, Villupuram-8 each, Tirupathur-7
 - ✓ **Jharkhand:** Latehar-10
 - ✓ **Rayalaseema:** Kuppam (dist Chittoor) 9,
 - ✓ **Jammu:** Udampur-9
 - ✓ **Punjab:** Ajanala Arg (dist Amritsar) 9
 - ✓ **Konkan:** Tala (dist Raigad) 8, Murbad (dist Thane) 6,
 - ✓ **Saurashtra:** Vanthali (dist Junagadh) 7, Dasada (dist Surendranagar) 7,
 - ✓ **Haryana:** Ismailabad (dist Kurukshetra) 7, Jhansa Irr (dist Kurukshetra) 7,
 - ✓ **Kerala:** Venkurinji AWS (Pathanamthitta district) 7, Ernakulam South 6, Urumi AWS (Kozhikode district) 5,
 - ✓ **Uttar Pradesh:** Nawabganj (dist Bareilly) 6, Kakrahi (dist Siddharth Nagar) 5,

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 Gujarat state on 18th & 19th; south Rajasthan on 18th and over Odisha on 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.

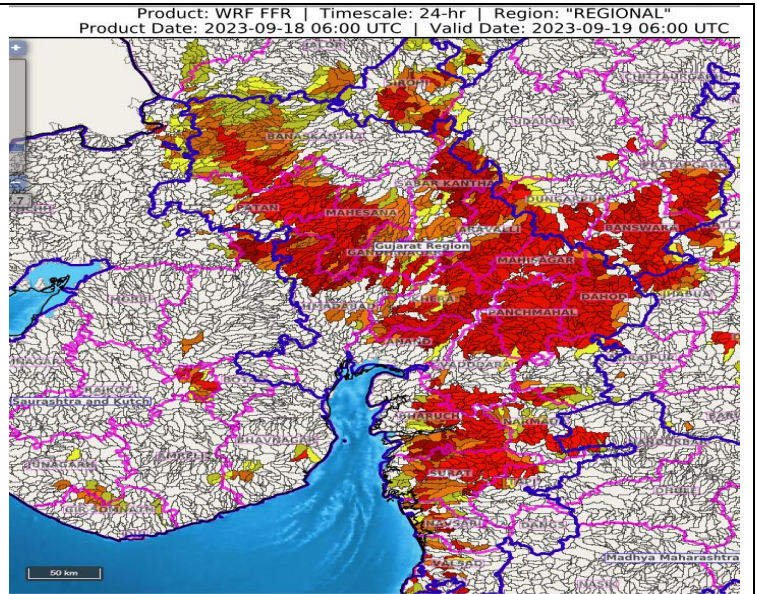
Action suggested:

- 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 19-09-2023 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of Gujarat Region adjoining South East Rajasthan, West Rajasthan 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.



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)