



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 06<sup>th</sup> September, 2024

Time of Issue: 1330 hours IST

**Subject: (i) Heavy to very heavy rainfall likely over Gujarat, Maharashtra & East Rajasthan during 06<sup>th</sup>-08<sup>th</sup> September.**  
**(ii) Heavy to very heavy rainfall likely over Telangana, Andhra Pradesh, East & northeast India during 08<sup>th</sup>-10<sup>th</sup> September.**

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

**Heavy to very heavy rainfall** at isolated places Gujarat Region, Himachal Pradesh; **Heavy rainfall** at isolated places over Bihar, East Rajasthan, East Uttar Pradesh, Madhya Maharashtra, Assam & Meghalaya, East Madhya Pradesh, Jharkhand, Odisha, Chhattisgarh, Telangana, Tamil Nadu, Puducherry, Nagaland, Manipur, Mizoram & Tripura, West Uttar Pradesh, Coastal Andhra Pradesh & Yanam, Kerala & Mahe and Konkan & Goa.

**Weather Systems:**

- ✓ The western end of **monsoon trough** is near its normal position and eastern end is south of its normal position at mean sea level. It is likely to continue so for next 2-3 days.
- ✓ Yesterday's **low pressure area** lay over central and adjoining north Bay of Bengal at 0830 hrs IST of today, the 6<sup>th</sup> September, 2024. It is likely to move slowly nearly northwards and intensify into **Depression** over northwest Bay of Bengal and adjoining areas of Gangetic West Bengal, north Odisha and Bangladesh coasts around 9<sup>th</sup> September. Thereafter, it is likely to move west-northwestwards across Gangetic West Bengal and adjoining north Odisha, Jharkhand and adjoining north Chhattisgarh during subsequent 3-4 days.
- ✓ A **Western Disturbance** lay as a cyclonic circulation over Jammu and Kashmir in middle tropospheric levels.
- ✓ A cyclonic **circulation** over northeast Rajasthan extends upto middle tropospheric levels.

**Forecast & Warnings (upto 7 days) (Annexure II & III):**

❖ **West & Central India:**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over West India; Scattered to Fairly widespread light/moderate rainfall very likely over Central India during the week.
- ✓ Isolated **very heavy rainfall** very likely over Gujarat Region on 06<sup>th</sup> & 07<sup>th</sup>; ghat areas of Madhya Maharashtra during 06<sup>th</sup> -09<sup>th</sup>; Konkan & Goa during 07<sup>th</sup> – 09<sup>th</sup> September.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh during next 7 days; Saurashtra & Kutch on 06<sup>th</sup> & 07<sup>th</sup>; West Madhya Pradesh, Gujarat Region during 06<sup>th</sup> -08<sup>th</sup>; East Madhya Pradesh during 06<sup>th</sup> -08<sup>th</sup> and on 11<sup>th</sup> & 12<sup>th</sup>; Konkan & Goa, ghat areas of Madhya Maharashtra during 06<sup>th</sup> -11<sup>th</sup>; Vidarbha during 08<sup>th</sup> -12<sup>th</sup> September.

#### ❖ **South Peninsular India:**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Kerala & Mahe; Scattered to Fairly widespread light/moderate rainfall over Coastal Andhra Pradesh & Yanam, Telangana, Lakshadweep; isolated to scattered rainfall over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Interior Karnataka during the week.
- ✓ Isolated **very heavy rainfall** very likely over Coastal Andhra Pradesh & Yanam on 08<sup>th</sup> & 09<sup>th</sup>; Telangana on 09<sup>th</sup> & 10<sup>th</sup> September.
- ✓ Isolated **heavy rainfall** very likely over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal Karnataka during 06<sup>th</sup> -10<sup>th</sup>; Telangana during 08<sup>th</sup> -10<sup>th</sup> September.

#### ❖ **East & Northeast India**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar Islands during next 7 days; Scattered to Fairly widespread light/moderate rainfall very likely over Arunachal Pradesh during the week and East India during 06<sup>th</sup>-09<sup>th</sup> & fairly widespread to widespread light/moderate rainfall during 10<sup>th</sup>-12<sup>th</sup> September.
- ✓ Isolated **very heavy rainfall** very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 09<sup>th</sup> – 12<sup>th</sup>; Odisha on 08<sup>th</sup> & 09<sup>th</sup> September.
- ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura during next 7 days; Odisha, Jharkhand during 06<sup>th</sup> – 10<sup>th</sup>; Bihar on 06<sup>th</sup> & 07<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim on 09<sup>th</sup> & 10<sup>th</sup>; Gangetic West Bengal during 09<sup>th</sup> – 12<sup>th</sup>; Arunachal Pradesh during 10<sup>th</sup> – 12<sup>th</sup> September.

#### ❖ **Northwest India**

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Northwest India on 06<sup>th</sup> & 07<sup>th</sup>; isolated to scattered rainfall over the region during subsequent 5 days.
- ✓ Isolated **very heavy rainfall** very likely over East Rajasthan on 06<sup>th</sup> & 07<sup>th</sup> September.
- ✓ Isolated **heavy rainfall** very likely over Jammu division, Himachal Pradesh, West Uttar Pradesh on 06<sup>th</sup>; Uttarakhand on 06<sup>th</sup> & 07<sup>th</sup>; East Uttar Pradesh on 06<sup>th</sup>, 09<sup>th</sup> & 10<sup>th</sup>; southwest Rajasthan on 07<sup>th</sup>; East Rajasthan during 06<sup>th</sup> – 08<sup>th</sup> September.

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

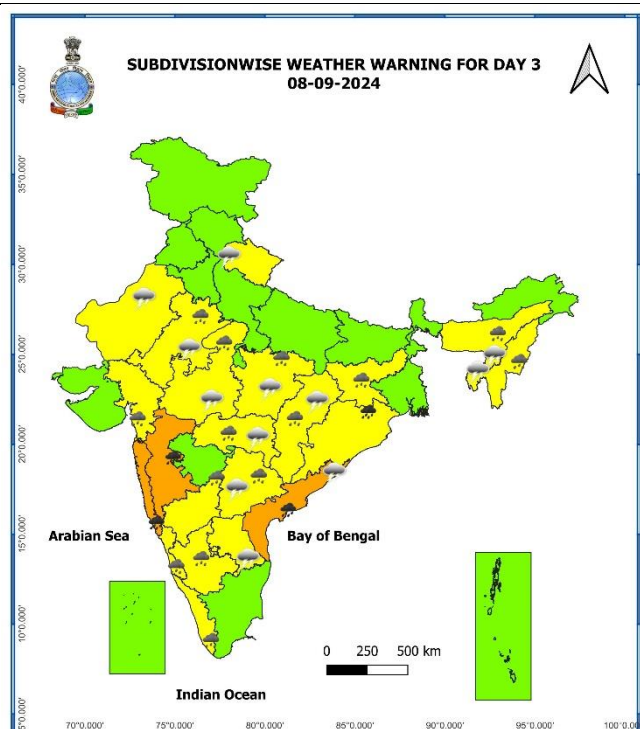
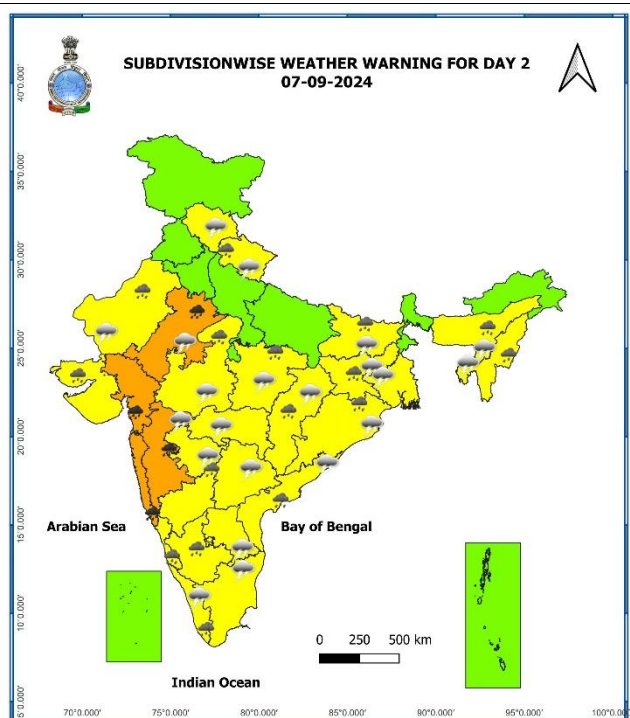
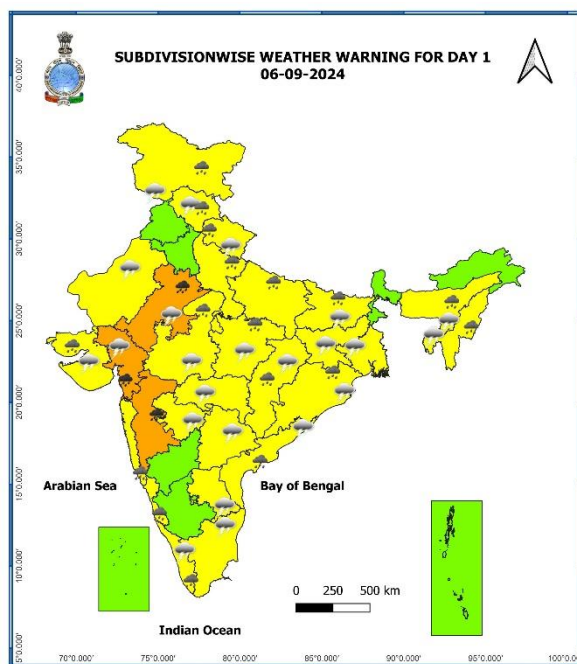
**For District wise warnings refer:** <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.ph>

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 06.09.2024 (in cm):**

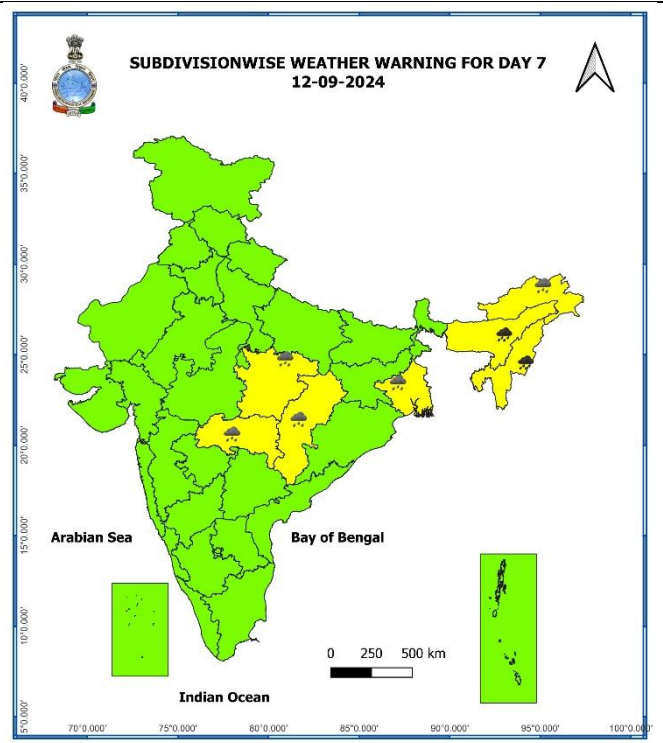
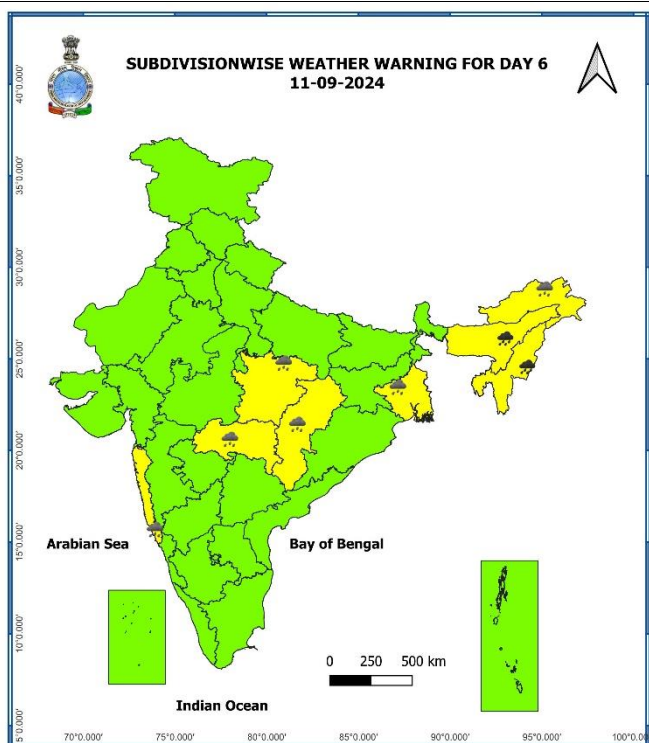
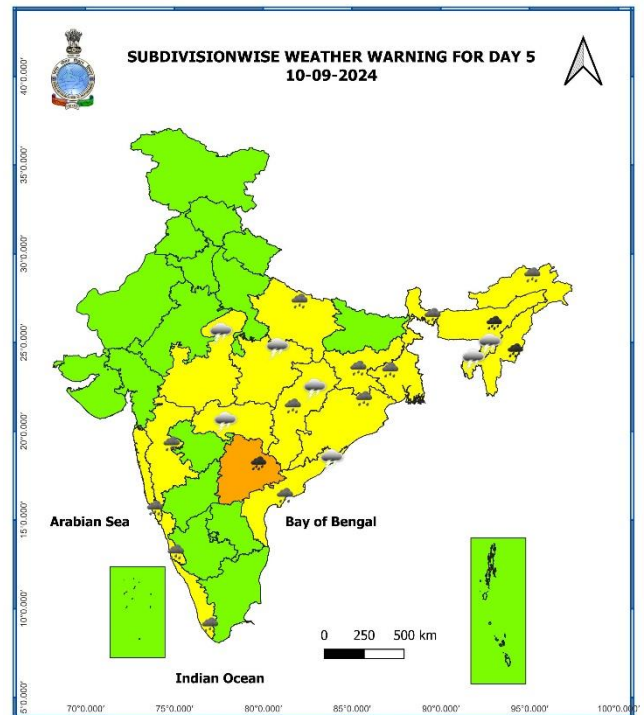
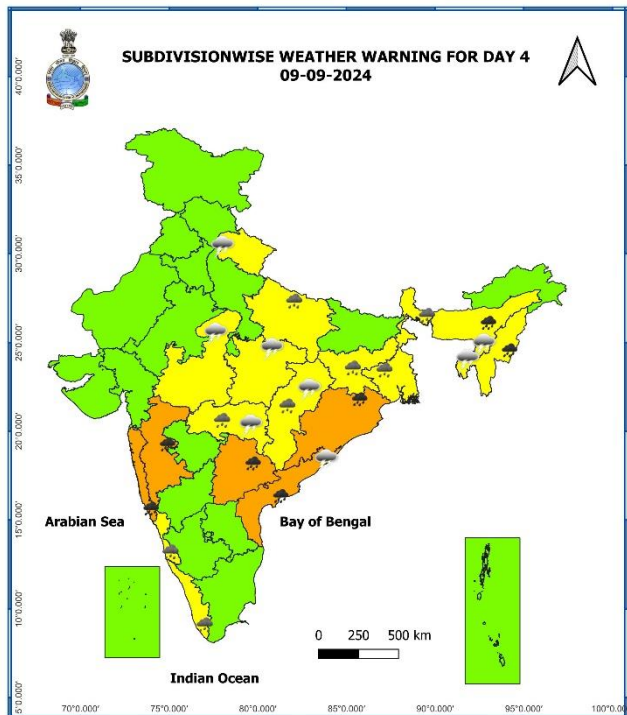
- ❖ **Gujarat Region:** Mansa (dist Gandhinagar) 18, Talod (dist Sabarkantha) 13, Dharoi Colony (dist Mehsana) 13, Vijapur (dist Mehsana) 13, Prantij (dist Sabarkantha) 10, Radhanpur (dist Patan) 9, Kapadvanj (dist Kheda) 9, Himatanagar (dist Sabarkantha) 9, Mahesana (dist Mehsana) 8, Anand (dist Anand) 8, Palanpur (dist Banaskantha) 8, Deesa (dist Banaskantha) 7, Kheralu (dist Mehsana) 7, Saraswati (dist Patan) 7, Dharampur (dist Valsad) 7;
- ❖ **Himachal Pradesh:** Naina Davi (dist Bilaspur) 16;
- ❖ **Bihar:** Turkaulia (dist East Champaran) 11, Arrah (dist Bhojpur) 11, Phulwari Sharif (dist Patna) 11, Bakhtiarpur (dist Patna) 10, Punpun (dist Patna) 10, Lalganj (dist Vaishali) 9, Piprakothi (dist East Champaran) 9, Patna Aerodrome (dist Patna) 9, Sripalpur (dist Patna) 8, Motihari (dist East Champaran) 7, Sanjhauli (dist Rohtas) 7, Adapur (dist East Champaran) 7, Danapur (dist Patna) 7, Bettiah (dist West Champaran) 7, Bind (dist Nalanda) 7;
- ❖ **East Rajasthan:** Shahpura (dist Bhilwara) 11, Hurda Sr (dist Bhilwara) 7, Banera Sr (dist Bhilwara) 7;
- ❖ **East Uttar Pradesh:** Nichlaul (dist Maharajganj) 11, Patti (dist Pratapgarh) 7, Kaiserganj (dist Bahraich) 7, Bansgaon (dist Gorakhpur) 7; Attarra (dist Banda) 7,
- ❖ **Madhya Maharashtra:** Gaganbawada (dist Kolhapur) 10, Mahabaleshwar- Imd Obsy (dist Satara) 9, Igatpuri (dist Nashik) 8, Lonavala\_agri (dist Pune) 8;
- ❖ **Assam & Meghalaya:** Agia\_AEGCL AWS (dist Goalpara) 10;
- ❖ **East Madhya Pradesh:** Bilhari (dist Katni) 9, Karanjia (dist Dindori) 9, Kirnapur (dist Balaghat) 7,
- ❖ **Jharkhand:** Kurdeg (dist Simdega) 9, Majhgaon (dist West Singhbhum) 7, Daltonganj (dist Palamu) 7;
- ❖ **Odisha:** Mathili (Malkangiri) 8, Rayagada (Rayagada) 8, Bargarh (Bargarh) 8, Nandahandi (Nawarangpur) 7;
- ❖ **Chhattisgarh:** Poudi Uparora (dist Korba) 8, Labhandih (dist Raipur) 7, Hasaud (dist Sakti) 7, Janjgir (dist Janjgir) 7, Baramkela (dist Sarangarh Bilaigarh) 7, Naya Baradwar (dist Sakti) 7;
- ❖ **Telangana:** Maddur (dist Narayanpet) 9, Maganoor (dist Narayanpet) 9, Itikyal (dist JogulambaGadwal) 9, Gopalpet (dist Wanaparthy) 7, Narayanpet (dist Narayanpet) 7, Utkoor (dist Narayanpet) 7;
- ❖ **Tamil Nadu, Puducherry:** Zone 15 Sholinganallur (dist Chennai) 8;
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Tening Nsdma\_aws (dist Peren) 8;
- ❖ **West Uttar Pradesh:** Bulandshahr (dist Bulandshahar) 8,
- ❖ **Coastal Andhra Pradesh & Yanam:** Jiyamma Valasa (dist Parvathipuram Manyam) 7, Anakapalle (dist Anakapalli) 7;
- ❖ **Kerala & Mahe:** Muliya (dist Kasod) 7;
- ❖ **Konkan & Goa:** Matheran (dist Raigad) 7;

S. No.	Subdivision	06-Sep	07-Sep	08-Sep	09-Sep	10-Sep	11-Sep	12-Sep
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	SCT	SCT	SCT	SCT	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	SCT	FWS	FWS	WS	WS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	WS	WS	WS	WS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	SCT	SCT	FWS	WS	FWS	FWS
6	GANGETIC WEST BENGAL	SCT	SCT	SCT	SCT	FWS	WS	WS
7	ODISHA	FWS	FWS	FWS	FWS	FWS	SCT	SCT
8	JHARKHAND	SCT	SCT	FWS	FWS	WS	WS	WS
9	BIHAR	SCT	SCT	SCT	SCT	SCT	FWS	FWS
10	EAST UTTAR PRADESH	SCT	SCT	SCT	FWS	FWS	SCT	SCT
11	WEST UTTAR PRADESH	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
12	UTTARAKHAND	FWS	FWS	SCT	SCT	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
14	PUNJAB	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
15	HIMACHAL PRADESH	FWS	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	FWS	SCT	ISOL	ISOL	DRY	DRY	DRY
17	WEST RAJASTHAN	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	FWS	FWS	FWS	SCT	SCT	ISOL	ISOL
19	WEST MADHYA PRADESH	FWS	FWS	SCT	ISOL	SCT	SCT	SCT
20	EAST MADHYA PRADESH	FWS	FWS	SCT	SCT	SCT	SCT	SCT
21	GUJARAT REGION	WS	WS	WS	WS	WS	FWS	FWS
22	SAURASHTRA & KUTCH	WS	WS	WS	FWS	FWS	FWS	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
25	MARATHAWADA	SCT	FWS	SCT	SCT	SCT	SCT	FWS
26	VIDARBHA	FWS	FWS	FWS	FWS	FWS	SCT	SCT
27	CHHATTISGARH	FWS	WS	WS	WS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	FWS	FWS	FWS	SCT	SCT	SCT
29	TELANGANA	FWS	FWS	SCT	SCT	SCT	ISOL	ISOL
30	RAYALASEEMA	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAICAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	SCT	FWS	SCT	SCT	ISOL	ISOL	ISOL
34	SOUTH INTERIOR KARNATAKA	SCT	FWS	SCT	SCT	ISOL	ISOL	ISOL
35	KERALA & MAHE	WS	WS	WS	WS	WS	FWS	FWS
36	LAKSHADWEEP	SCT	SCT	FWS	FWS	FWS	SCT	SCT

- As the lead period increases forecast accuracy decreases.







- 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 over Madhya Maharashtra during 06<sup>th</sup> -09<sup>th</sup>; Gujarat Region, East Rajasthan on 06<sup>th</sup> & 07<sup>th</sup>; Konkan & Goa during 07<sup>th</sup> – 09<sup>th</sup>; Odisha, Coastal Andhra Pradesh & Yanam on 08<sup>th</sup> & 09<sup>th</sup>; Telangana on 09<sup>th</sup> & 10<sup>th</sup>; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 09<sup>th</sup> – 12<sup>th</sup> September.
- ✓ **Low flash flood risk** likely over few watersheds & neighbourhoods of Uttarakhand, Himachal Pradesh, East Rajasthan and Gujarat Region on 06<sup>th</sup> & 07<sup>th</sup> September. **(ANNEXURE IV)**

## 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.
- ✓ Reduction of visibility over sea area due to sea spray induced by strong wind and 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

- ✓ Judicious regulation of offshore/onshore Operations
- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ 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 Odisha, Jharkhand, Bihar, Jammu & Kashmir, Himachal Pradesh, East Uttar Pradesh, East Rajasthan, Chhattisgarh, Madhya Maharashtra, Gujarat region, Coastal Andhra Pradesh and Telangana.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Konkan & Goa, Saurashtra & Kutch, Kerala, and Karnataka.
- Provide mechanical support to horticultural crops & staking to vegetables.



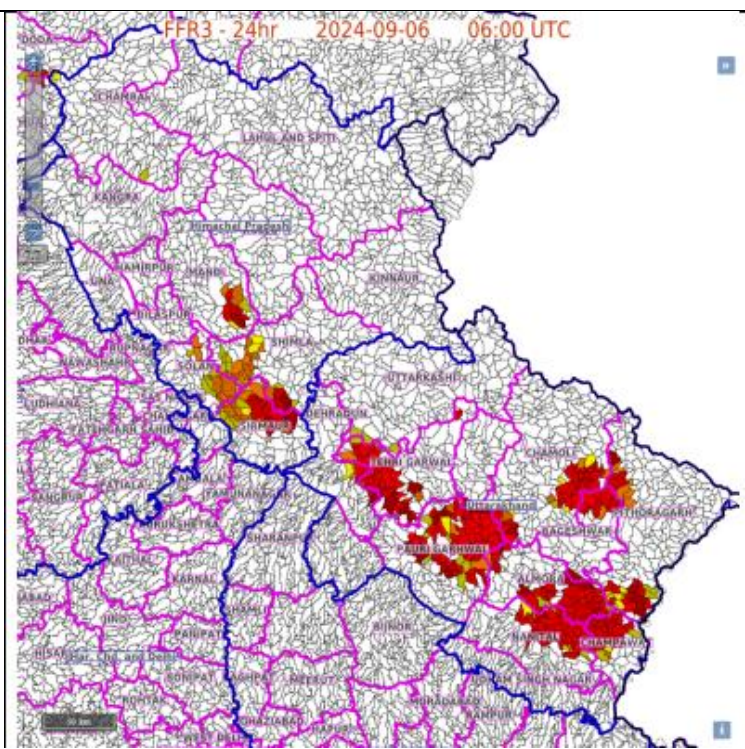
**Flash Flood Guidance:****24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 07-09-2024:**

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

**Uttarakhand** – Dehradun, Uttarkashi, Tehri Garhwal, Rudraprayag, Pauri Garhwal, Almora, Bageshwar, Pithoragarh, Chamoli, Nainital and Chapawat districts.

**Himachal Pradesh** – Shimla, Sirmaur, Solan, Mandi and Bilaspur districts.

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

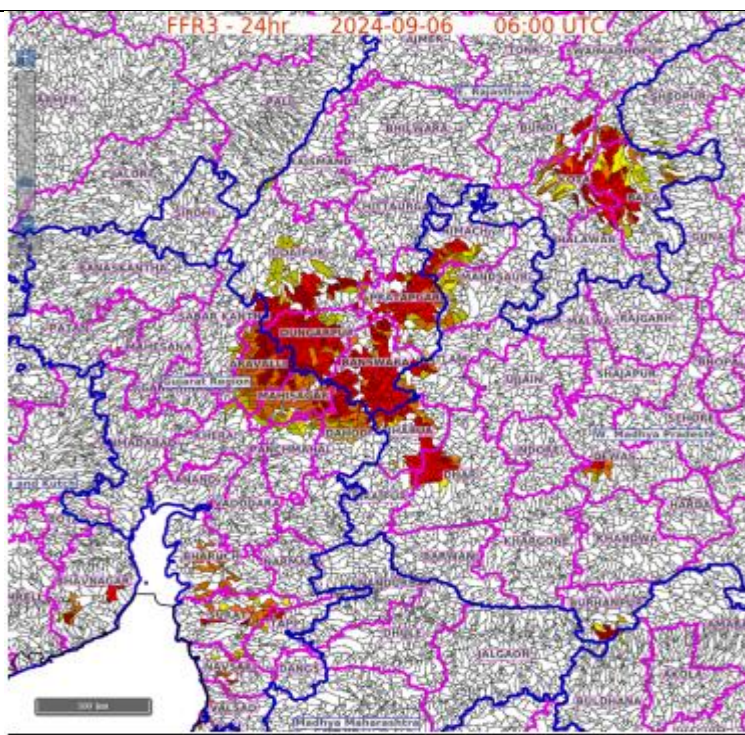
**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 07-09-2024:**

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

**East Rajasthan** – Dungarpur, Banswara, Pratapgarh, Udaipur, Kota, Bundi and Baran districts West Madhya Pradesh – Neemach, Mandsaur Ratlan and Jhabua districts.

**Gujarat Region** – Aravali, Mahisagar, Dohad, Panchmahal, Bharuch, Surat, Valsad and Navsari districts.

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



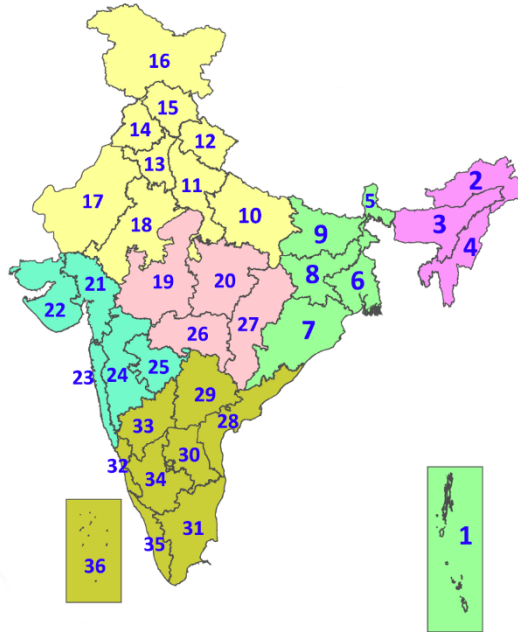


## Legends & abbreviations:

- ❖ **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.

## LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और माहे
36. लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chandigarh & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidarbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

### COLOUR CODED WARNING

No Warning (No Action)

Watch (Be Aware)

Alert (Be Prepared To Take Action)

Warning (Take Action)

### Probabilistic Forecast

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

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation since 1875)

## DEFINITION/CRITERIA

### Rain/ Snow \*

Heavy: 64.5 to 115.5 mm/cm \*  
Very Heavy: 115.6 to 204.4 mm/cm \*  
Extremely Heavy: > 204.4 mm/cm \*

### Heat Wave

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions  
(a) Based on Departure from normal

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). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$ .

Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^{\circ}\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^{\circ}\text{C}$

### Warm Night

When maximum temperature remains  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

Severe Warm Night: When minimum temperature departure  $> 6.4^{\circ}\text{C}$ .

### Cold Wave

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions.  
(a). Based on departure

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) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is  $\leq 4.0^{\circ}\text{C}$

Severe Cold Wave: When Minimum Temperature is  $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is  $\leq -4.5^{\circ}\text{C}$  & actual Minimum Temperature is  $\leq 15^{\circ}\text{C}$

### Cold Day

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions  
Based on departure

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  $\leq -6.5^{\circ}\text{C}$

### Fog

Phenomenon of small droplets suspended in air and the horizontal visibility  $< 1\text{km}$

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

### Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

### Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

### Frost

Ice deposits on ground

Air temperature  $\leq 4^{\circ}\text{C}$  ( over Plains)

### Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph

Severe: Wind speed 62-87 kmph

Very Severe: Wind speed  $> 87$  kmph

### Sea State

Effect of various waves in the sea over specific area

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

### Cyclone

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)

\* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".  
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.  
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599  
(Service to the Nation since 1875)