



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 10th September, 2024

Time of Issue: 1315 hours IST

Subject: Under the influence of Depression over north Chhattisgarh, heavy to very heavy rainfall likely over Central India on 10th & 11th September and Extremely heavy rainfall over East Madhya Pradesh on 10th and over West Madhya Pradesh on 11th September.

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

Heavy to very heavy rainfall with isolated extremely heavy falls at a few places over Chhattisgarh, Vidarbha and Odisha, **Heavy to very heavy rainfall** at isolated places over East Madhya Pradesh, Madhya Maharashtra and Gujarat Region; **Heavy rainfall** at isolated places over West Madhya Pradesh, Punjab, Uttarakhand, East Rajasthan, East Uttar Pradesh Himachal Pradesh, Konkan & Goa, Coastal Karnataka and South Interior Karnataka.

Weather Systems:

- ✓ Yesterday's depression over North Chhattisgarh & adjoining interior Odisha moved westnorthwestwards with a speed of 20 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 10th September, 2024 over North Chhattisgarh near latitude 21.9°N and longitude 82.8°E, 70 km east-southeast of Bilaspur (Chhattisgarh), 140 km northeast of Raipur (Chhattisgarh) and 220 km east of Malanjkhand (East Madhya Pradesh). It is very likely to move west-northwestwards across north Chhattisgarh and weaken into a well marked low pressure area over Chhattisgarh and adjoining East Madhya Pradesh around evening of 10th September.
- ✓ The **monsoon trough** is active and south of its normal position at mean sea level. It is likely to continue so for next 3-4 days.
- ✓ A cyclonic circulation lies over south Gujarat at lower tropospheric levels.

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

❖ **South Peninsular India:**

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Kerala & Mahe, Lakshadweep; Scattered to Fairly widespread light/moderate rainfall over Coastal Andhra Pradesh & Yanam, Telangana; isolated to scattered rainfall over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Interior Karnataka during the week.
- ✓ Isolated **heavy rainfall** very likely over Kerala & Mahe on 10th; South Interior Karnataka on 10th & 11th; Coastal Karnataka during 10th -12th September.

East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya, Andaman & Nicobar Islands, West Bengal & Sikkim, Jharkhand during the week; Scattered to Fairly widespread light/moderate rainfall very likely over Arunachal Pradesh, Bihar, Odisha during the week.

- ✓ **Isolated extremely heavy rainfall very likely over Tripura, Mizoram and south Manipur on 13th September.**
- ✓ **Isolated very heavy rainfall** very likely over Assam & Meghalaya on 13th & 14th; south Mizoram on 12th September.
- ✓ **Isolated heavy rainfall** very likely over Assam & Meghalaya during next 6 days; Arunachal Pradesh on 10th and during 13th -16th; Nagaland, Manipur, Mizoram & Tripura during 10th -14th; West Bengal & Sikkim, Bihar during 12th -14th; Jharkhand on 13th & 14th; Odisha on 10th, during 12th-14th September.

West & Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Central India and Konkan & Goa during the week; Scattered to Fairly widespread light/moderate rainfall very likely over Madhya Maharashtra, Marathwada, Gujarat State during the week.
- ✓ **Isolated extremely heavy rainfall very likely over East Madhya Pradesh on 10th and over West Madhya Pradesh on 11th September.**
- ✓ **Isolated very heavy rainfall very likely over** Gujarat Region, Chhattisgarh on 10th; Vidarbha on 10th & 11th; Madhya Pradesh during 10th -14th September.
- ✓ **Isolated heavy rainfall** very likely over Madhya Pradesh during next 7 days; Vidarbha, Konkan & Goa, ghats areas of Madhya Maharashtra, Gujarat Region on 10th & 11th; Chhattisgarh during 14th - 16th September.

Northwest India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Uttarakhand, East Rajasthan, Uttar Pradesh; isolated to scattered rainfall over the remaining region during the week.
- ✓ **Isolated very heavy rainfall** very likely over Uttarakhand, Uttar Pradesh, East Rajasthan during 11th -13th; Haryana on 12th September.
- ✓ **Isolated heavy rainfall** very likely over Himachal Pradesh on 10th; Uttarakhand, Haryana during 10th -14th; Uttar Pradesh, East Rajasthan during 10th -15th September.

(ii) Wind warning

Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely over north Chhattisgarh till 10th September evening. It will decrease gradually thereafter.

For more details, kindly refer:

https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

For District wise warnings refer:

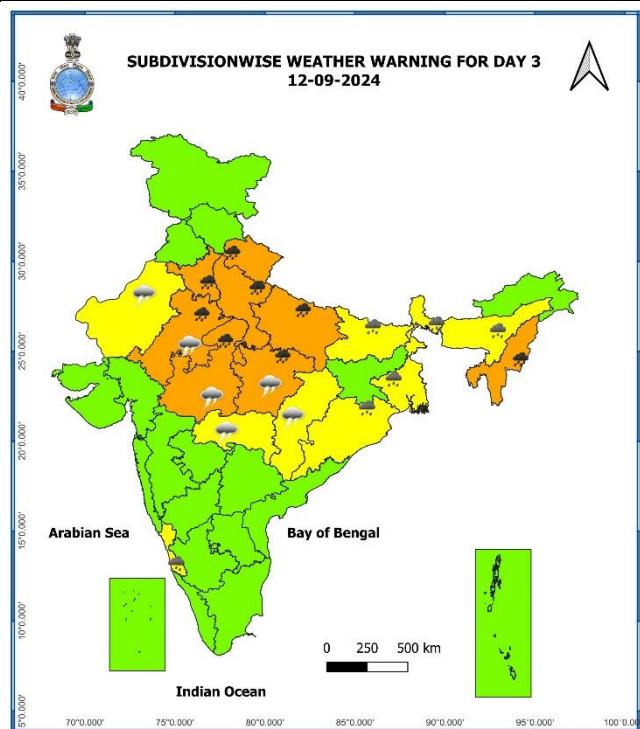
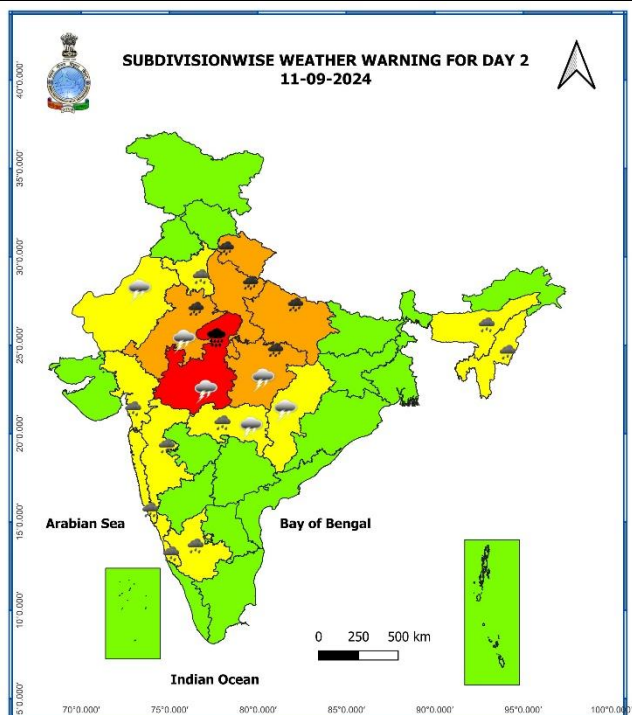
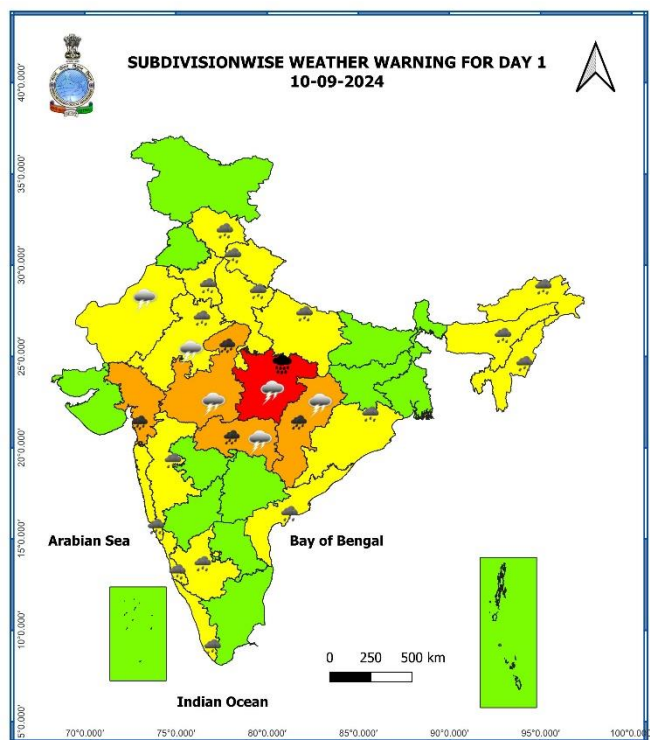
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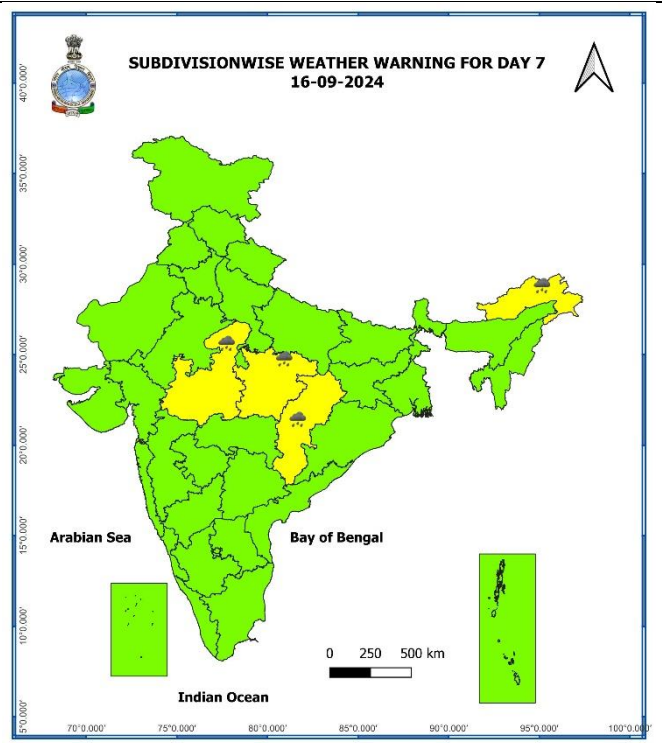
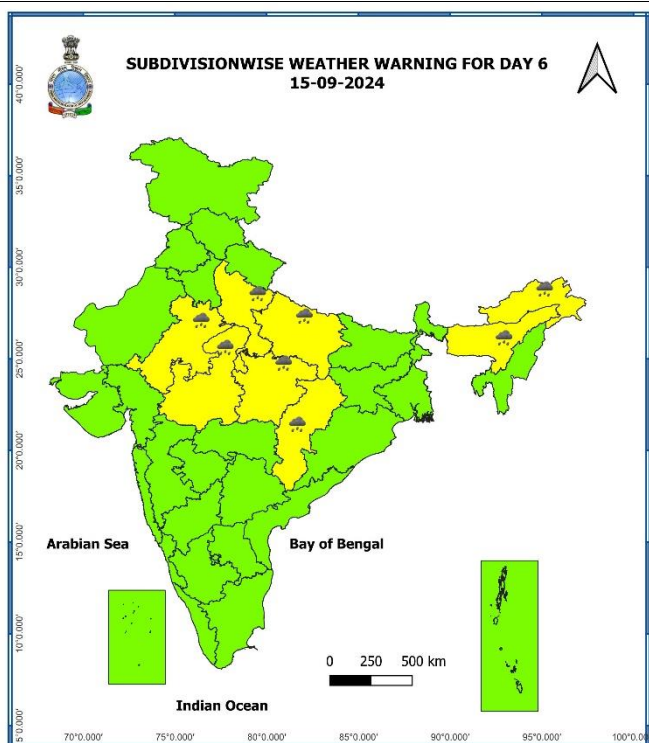
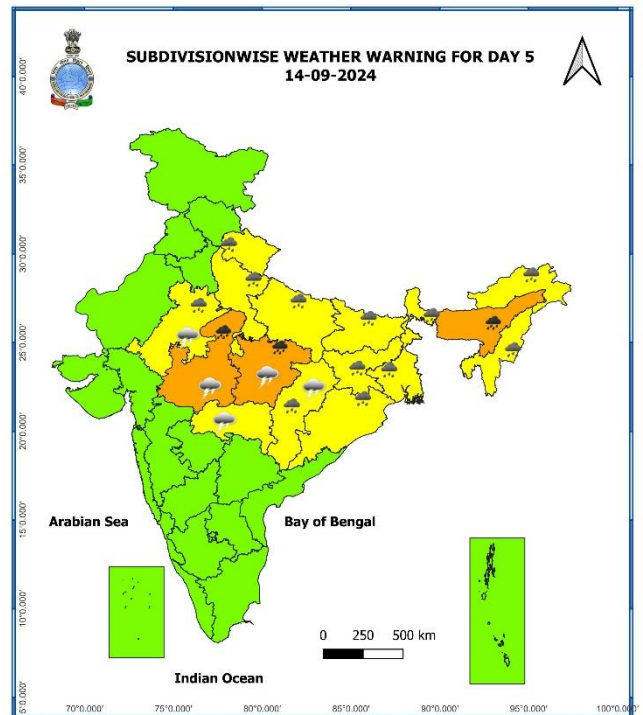
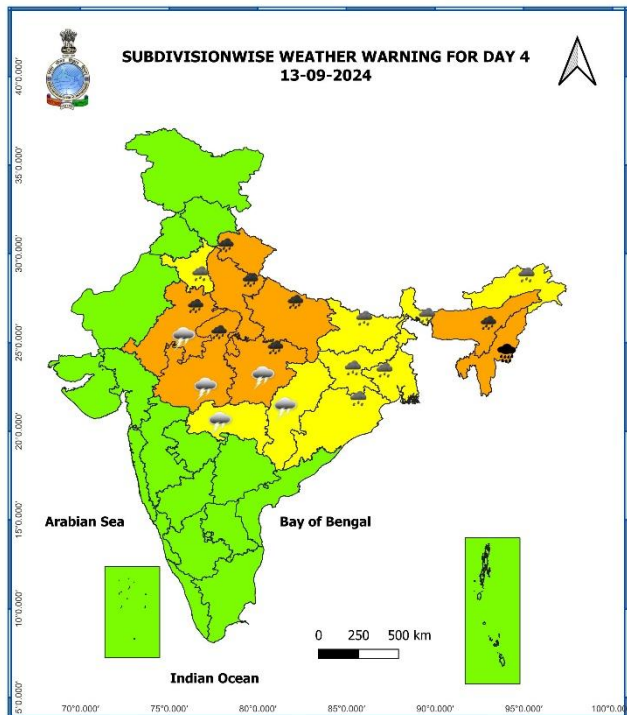
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 10.09.2024 (in cm):

- ❖ **Vidarbha:** Gondia Ap (dist Gondia) 29, Deori (dist Gondia) 21, Gondia (dist Gondia) 21, Salekasa (dist Gondia) 20, Sadakarjuni (dist Gondia) 19, Goregaon (dist Gondia) 18, Korchi (dist Gadchiroli) 15, Arjuni Morgaon (dist Gondia) 14, Amgaon (dist Gondia) 14, Lakhandur (dist Bhandara) 13, Desaignanj (dist Gadchiroli) 13, Sakoli (dist Bhandara) 12, Kuhi (dist Nagpur) 10, Sindewahi (dist Chandrapur) 10, Lakhani (dist Bhandara) 9, Mulchera (dist Gadchiroli) 9, Gadchiroli (dist Gadchiroli) 9, Bramhapuri (dist Chandrapur) 9, Dhanora (dist Gadchiroli) 9, Chamorshi (dist Gadchiroli) 8, Saoli (dist Chandrapur) 8, Bhamragad (dist Gadchiroli) 8, Kurkheda (dist Gadchiroli) 7, Pauni (dist Bhandara) 7, Nagbhir (dist Chandrapur) 7, Etapalli (dist Gadchiroli) 7,
- ❖ **Chhattisgarh:** Lal Bahadur Nagar (dist Rajnandgaon) 24, Sukma (dist Sukma) 19, Dongargarh (dist Rajnandgaon) 19, Gurur (dist Balod) 19, Rajnandgaon (dist Rajnandgaon) 18, Bhanupratappur (dist Kanker) 18, Khairagarh (dist Khairagarh Chh Gandai) 17, Balod (dist Balod) 16, Durgkondal (dist Kanker) 16, Baloda Bazar (dist Baloda Bazar) 16, Mohla (dist Mohala Manpur Chowki) 15, Lawan (dist Baloda Bazar) 15, Chhuria (dist Rajnandgaon) 15, Dhanora (dist Kondagaon) 15, Dongargaon (dist Rajnandgaon) 15, Bhatapara (dist Baloda Bazar) 15, Marri Bangla Deori (dist Balod) 15, Pallari/palari (dist Baloda Bazar) 14, Charama (dist Kanker) 14, Pithora (dist Mahasamund) 14, Dhamtari (dist Dhamtari) 14, Keshkal (dist Kondagaon) 14, Gangalur (dist Bijapur) 14, Doundi (dist Balod) 14, Pakhanjur (dist Kanker) 14, Khadgaon (dist Mohala Manpur Chowki) 14, Nerharpur (dist Kanker) 13, Suhela (dist Baloda Bazar) 13, Kukrel (dist Dhamtari) 13, Sonakhan (dist Baloda Bazar) 13, Antagarh (dist Kanker) 13, Manpur (dist Mohala Manpur Chowki) 12, Labhandih (dist Raipur) 12, Arjunda (dist Balod) 12, Darbha (dist Bastar) 12, Kanker (dist Kanker) 12, Kashdol (dist Baloda Bazar) 12, Raipur (dist Raipur) 12, Bhakhara (dist Dhamtari) 12, Komakhan (dist Mahasamund) 12,
- ❖ **Odisha:** Lanjigarh (Kalahandi) 23, Madanpur Rampur (Kalahandi) 22, Tikarpara (Angul) 15, Ambadola (Rayagada) 14, Nawapara (Nawapara) 13, Kotpad (Koraput) 11, Belgaon (Bolangir) 11, Birmaharajpur (Sonepur) 11, Malkangiri (Malkangiri) 10, Bissem-cuttack (Rayagada) 10, Athmalik (Angul) 10, Barmul (Nayagarh) 9, Lamataput (Koraput) 9, Kosagumda (Nawarangpur) 8, Harabhanga (Boudhgarh) 8, Mathili (Malkangiri) 7, Nawarangpur (Nawarangpur) 7, Padia (Malkangiri) 7, Gaisilet (Bargarh) 7, Nawarangpur Pto (Nawarangpur) 7, Tarva (Sonepur) 7, Sonepur (Sonepur) 7, Nandahandi (Nawarangpur) 7, Jeypore (Koraput) 7, Dabugan (Nawarangpur) 7, Narla (Kalahandi) 7, Borigumma (Koraput) 7, Rairakhol (Sambalpur) 7,
- ❖ **East Madhya Pradesh:** Kirnapur (dist Balaghat) 20, Matiyari (dist Mandla) 13, Baihar (dist Balaghat) 13, Lanji (dist Balaghat) 12, Lalburra (dist Balaghat) 10, Bichhia (dist Mandla) 9, Dhanora (dist Seoni) 7, Paraswada (dist Balaghat) 7, Harrai (dist Chindwara) 7;
- ❖ **Gujarat Region:** Umerpada (dist Surat) 19, Sagbara (dist Narmada) 13, Gandevis (dist Navsari) 10, Dediapada (dist Narmada) 8, Singvad (dist Dahod) 7, Narmada_kvks Aws (dist Narmada) 7;
- ❖ **Madhya Maharashtra:** Akkalkuwa (dist Nandurbar) 14,
- ❖ **Punjab:** Ballawal Saunkri (dist Sbs Nagar) 10;
- ❖ **West Madhya Pradesh:** Raoti (dist Ratlam) 10, Satwas (dist Dewas) 9, Gogawan (dist Khargone) 9, Nasrullahganj (dist Sehore) 7, Petlawad (dist Jhabua) 7;
- ❖ **East Rajasthan:** Chothkabarwara Sr (dist Sawai Madhopur) 9, Mounnt Abu (dist Sirohi) 8, Anta Sr (dist Baran) 8, Mounntabu Tehsil Sr (dist Sirohi) 7, Sirohi (dist Sirohi) 7, Kishanganj (dist Baran) 7, Dausa (dist Dausa) 7;
- ❖ **Himachal Pradesh:** Naina Davi (dist Bilaspur) 9, Barthin (dist Bilaspur) 8,
- ❖ **Konkan & Goa:** Khed (dist Ratnagiri) 7, Valpoi (dist North Goa) 7, Chiplun (dist Ratnagiri) 7,
- ❖ **Coastal Karnataka:** Honavar Obsy (dist Uttara Kannada) 7;
- ❖ **South Interior Karnataka:** Kottigehara (dist Chikkamagaluru) 7,
- ❖ **East Uttar Pradesh:** Tirwa (dist Kannauj) 7,
- ❖ **Uttarakhand:** Ukhimath (rudraprayag) 7.

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

- ✓ Isolated **extremely heavy rainfall** very likely over East Madhya Pradesh on 10th; West Madhya Pradesh on 11th; Tripura, Mizoram and south Manipur on 13th September.
- ✓ **Very heavy rainfall** at isolated places over Gujarat Region, Chhattisgarh on 10th; Vidarbha on 10th & 11th; Madhya Pradesh during 10th -14th; Assam & Meghalaya on 13th & 14th; south Mizoram on 12th; Uttarakhand, Uttar Pradesh, East Rajasthan during 11th -13th; Haryana on 12th September.
- ✓ **Moderate to High flash flood risk** likely over East Madhya Pradesh; **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand, East Rajasthan, Vidarbha, Chhattisgarh and West Madhya Pradesh on 10th & 11th 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.
- ✓ Disruption of traffic in major cities and roadways due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutchha 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 and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested

- ✓ 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 rice, finger millet, maize and groundnut in **Odisha**; from rice, maize, sugarcane, black gram, horse gram and niger crops in **Chhattisgarh**; from rice, cotton, soybean, pigeon pea, orchards and vegetables in **Vidarbha**; from cotton, maize, soybean, pulses and vegetables in **Madhya Pradesh** to prevent water logging.
- Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Uttarakhand, East Rajasthan, Konkan & Goa, Madhya Maharashtra, Gujrat region, Kerala and Coastal Karnataka.
- Provide mechanical support to horticultural crops & staking to vegetables.
- Keep the harvested produce at safer place.

Flash Flood Guidance:**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 11-09-2024:**

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

East Rajasthan - Banswara, Baran, Bundi, Dungarpur, Jhalawar and Kota districts.

Chhattisgarh - Balod, Bilaspur, Durg, Mungeli and Rajnandgaon districts.

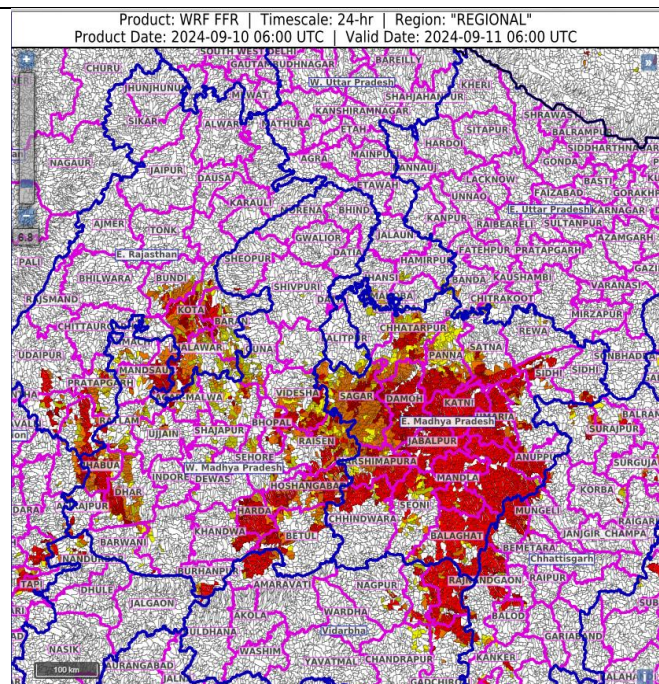
Vidarbha - Bhandara, Gadchiroli, Gondiya and Nagpur districts.

West Madhya Pradesh - Agar-Malwa, Bhopal, Burhanpur, Dhar, Guna, Harda, Jhabua, Khandwa, Raisen, Rajgarh, Ratlam, Videsha and Hoshangabad districts.

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

East Madhya Pradesh - Anuppur, Balaghat, Chhatarpur, Chhindwara, Damoh, Dindori, Jabalpur, Katni, Mandla, Narshimpura, Niwari, Panna, Rewa, Sagar, Satna, Seoni, Shahdol, Sidhi, Singrauli, Tikamgarh and Umaria 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.

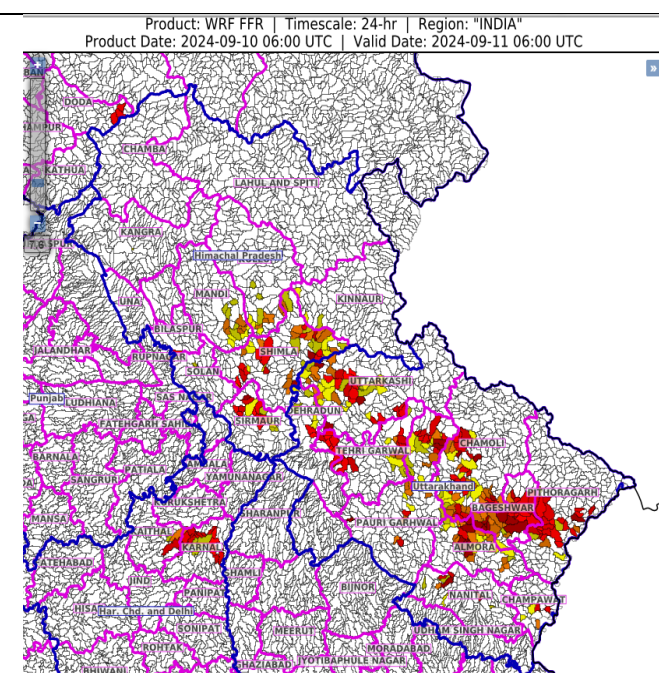
**24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 11-09-2024 :**

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

Himachal Pradesh - Kinnaur, Kullu, Mandi, Shimla, Sirmaur and Solan districts.

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

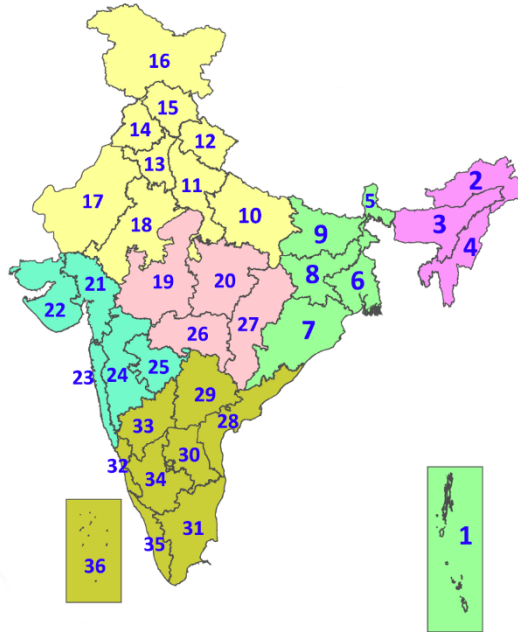


Legends & abbreviations:

- ❖ **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°C to 6.4°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°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°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°C to -6.4°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°C to -6.4°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)

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