

Monday, September 09, 2024
Time of Issue: 2045 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

Weather Warnings for next 7 days is given below:

(Graphics for warnings & rainfall distribution (Table 1) are given below the text:

09 September (Day 1):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm) with extremely heavy falls (> 20 cm)** very likely at isolated places over Odisha, Vidarbha and Chhattisgarh; **Very heavy rainfall (≥ 12 cm)** at isolated places over East Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Telangana; **Heavy rainfall (≥ 7 cm)** at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Jharkhand, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, ghat areas of Madhya Maharashtra, Gujarat Region, Kerala & Mahe, Coastal Karnataka, South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Kerala & Mahe; **with lightning** very likely at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, West Bengal & Sikkim, Bihar, Jharkhand, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over southern parts of east central Arabian sea, along and off Sri Lanka coast, along and off Andhra Pradesh coast, most parts of south, central, and north Bay of Bengal, Andaman Sea. Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph is likely to prevail over gulf of Mannar, along and off south Tamil Nadu, many parts of south, central, and north Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. **Squally winds with speed reaching 55 kmph to 65 kmph gusting to 75 kmph** likely to prevail along and off north Andhra Pradesh, Odisha, west Bengal coasts adjoining northwest and west central Bay of Bengal. Fishermen are advised not to venture into these areas.

10 September (Day 2):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm) with extremely heavy falls (> 20 cm)** very likely at isolated places over East Madhya Pradesh; **Very heavy rainfall (≥ 12 cm)** very likely at isolated places over East Uttar Pradesh, West Madhya Pradesh, Vidarbha, Odisha; **Heavy rainfall (≥ 7 cm)** at isolated places over Uttarakhand, West Uttar Pradesh, East Rajasthan, Chhattisgarh, Gangetic West Bengal, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Gujarat Region, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal Karnataka & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Kerala & Mahe, Telangana; **with lightning** very likely at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, West Bengal & Sikkim, Bihar, Jharkhand, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of east central and few northern parts of south Arabian sea, along and off srilanka coast, most parts of south and central Bay of Bengal, northwest Bay of Bengal, many parts of northeast Bay of Bengal, along and off Andhra Pradesh, Odisha, west Bengal coasts, over north Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of Mannar, most parts of westcentral adjoining parts of eastcentral Bay of Bengal, along and off north Andhra Pradesh, Odisha, west Bengal coasts, over northwest Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.

11 September (Day 3):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Uttar Pradesh, Madhya Pradesh, East Rajasthan, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, Vidarbha, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Madhya Maharashtra, Gujarat Region & Coastal Karnataka.
- ❖ **Thunderstorm accompanied with lighting and gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Madhya Maharashtra, Marathwada, Gujarat Region.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is very likely to prevail over many parts of east central, northern parts of southwest & adjoining southeast Arabian sea, along and off srilanka coast, most parts of south and central Bay of Bengal, northwest Bay of Bengal, along and off north Andhra Pradesh, Odisha coasts. **squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over, gulf of Mannar, along and off south Tamilnadu coast, some parts of westcentral Bay of Bengal. **squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.

12 September (Day 4):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** likely at isolated places over East Uttar Pradesh, Madhya Pradesh, West Bengal & Sikkim, Bihar, Jharkhand & Arunachal Pradesh.
- ❖ **Thunderstorm accompanied with lighting** likely at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha Bihar.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail many parts of east central, northern parts of southwest & adjoining southeast Arabian sea, over gulf of Mannar, along and off srilanka coast, many parts of south and central Bay of Bengal. **squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over many parts of southeast & adjoining parts of eastcentral Bay of Bengal. **squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & southwestern parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.

13 September (Day 5):

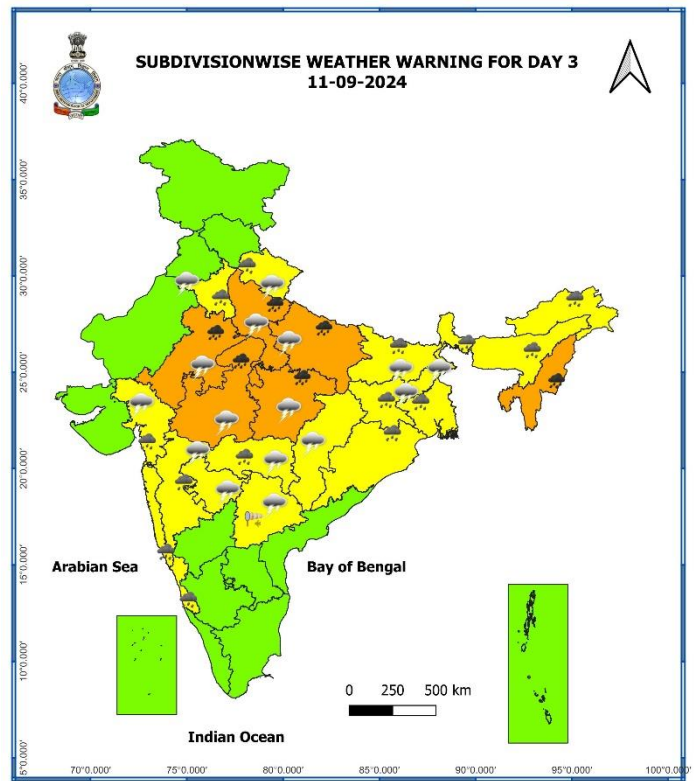
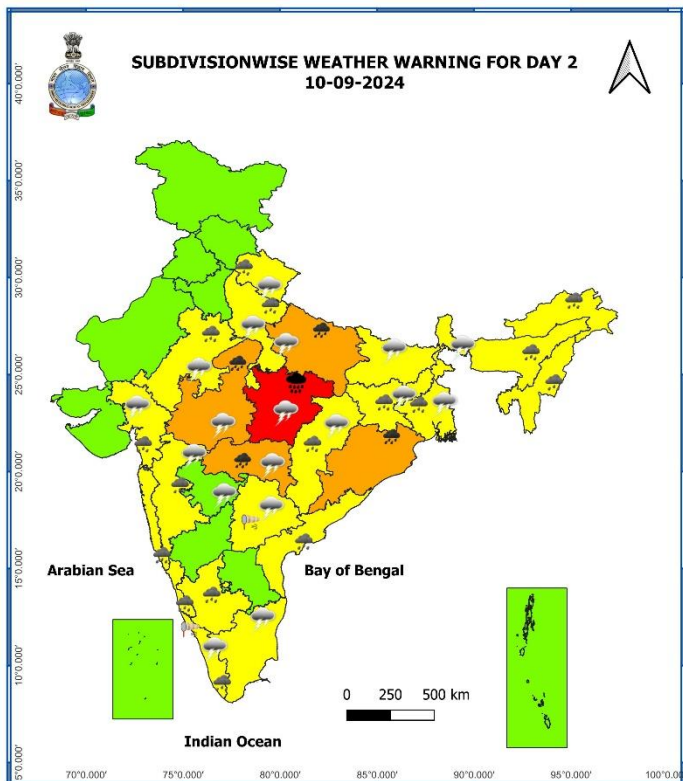
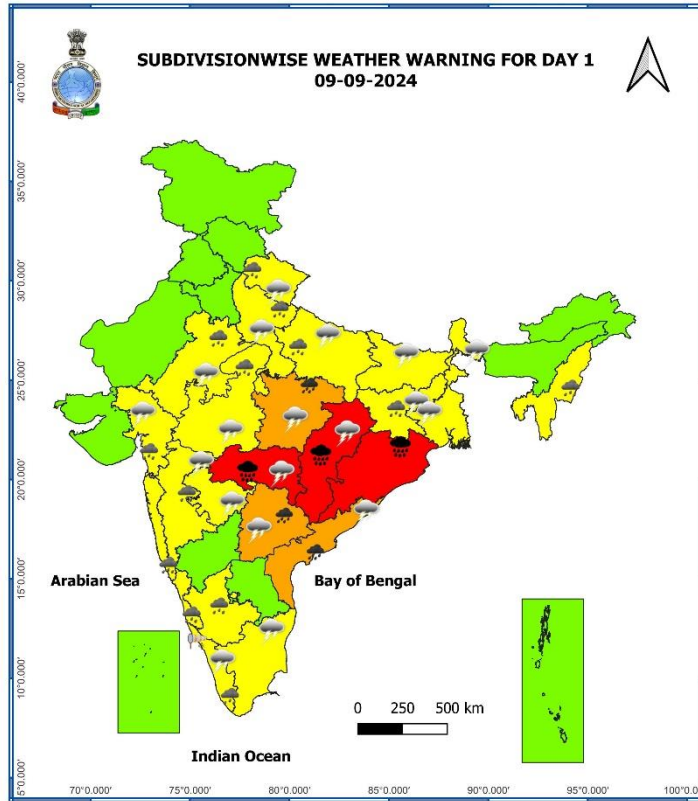
- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Uttarakhand, West Uttar Pradesh, Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** likely at isolated places East Uttar Pradesh, East Rajasthan, Madhya Pradesh, West Bengal & Sikkim, Bihar, Jharkhand.
- ❖ **Thunderstorm accompanied with lighting** likely at isolated places over Uttarakhand, over East Rajasthan, Madhya Pradesh, Vidarbha.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail many parts of east central & adjoining parts of westcentral Arabian sea, over gulf of Mannar, off srilanka coast, many parts of south and central Bay of Bengal, southern parts of northwest Bay of Bengal. **squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over many parts of southeast & adjoining parts of eastcentral Bay of Bengal. **squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & southwestern parts of westcentral Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.

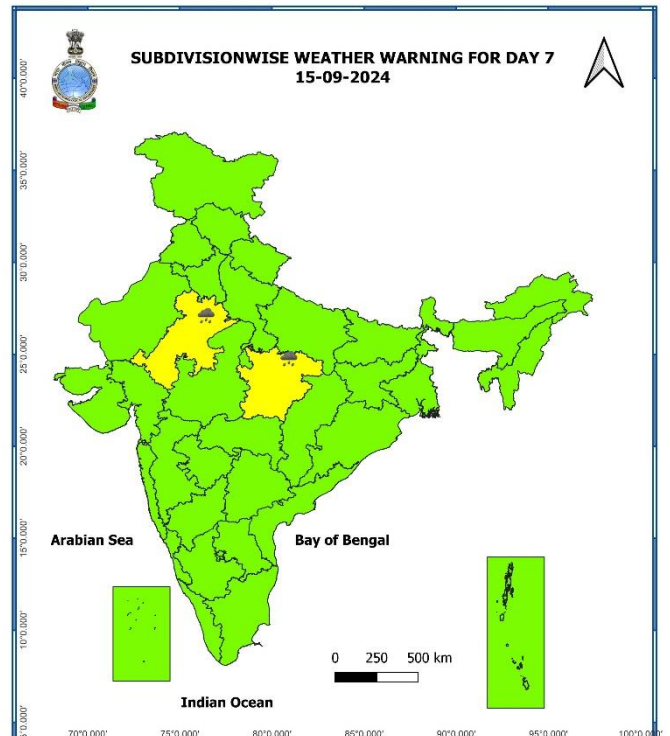
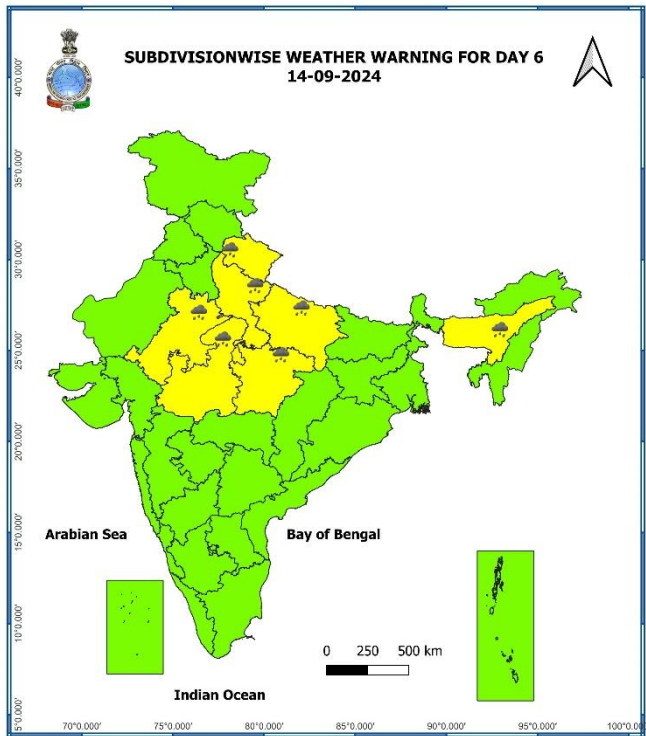
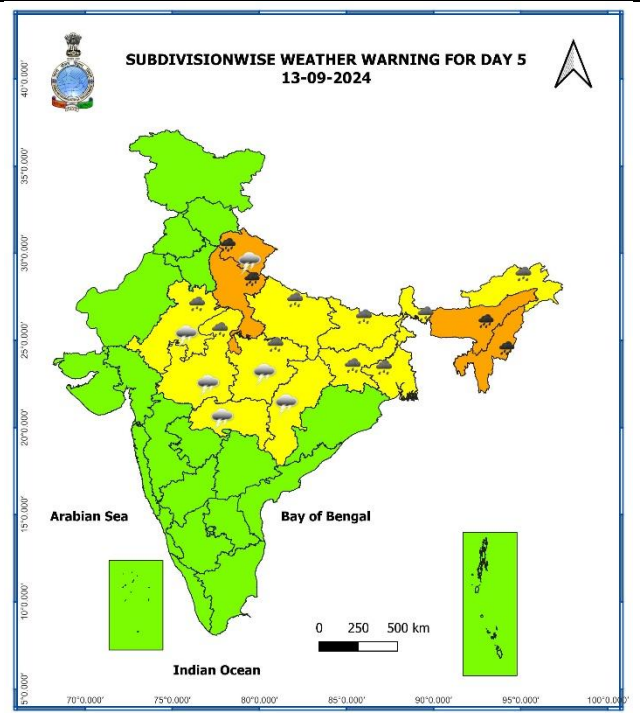
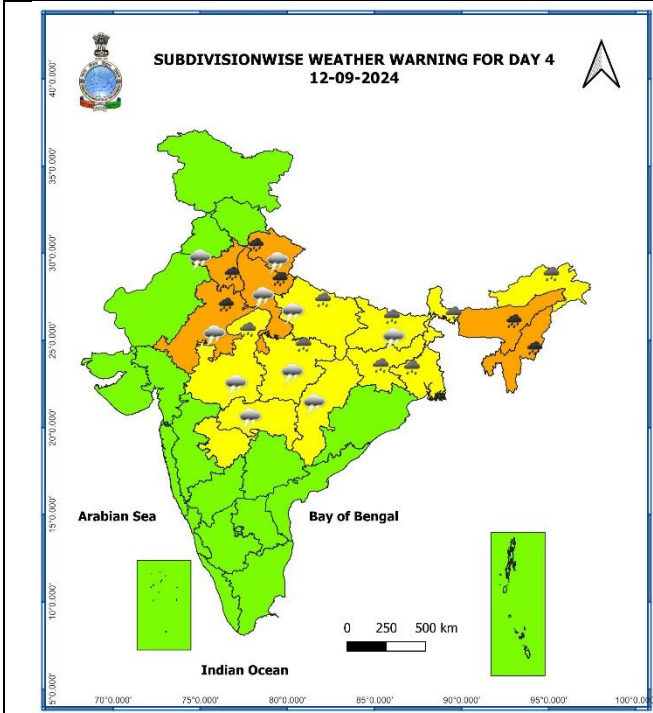
14 September (Day 6):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Assam & Meghalaya.

15 September (Day 7):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over East Rajasthan & East Madhya Pradesh.





- 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.

Table-1

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

- As the lead period increases forecast accuracy decreases.

Impact due to

- ✓ Isolated **extremely heavy rainfall** very likely over Vidarbha, Odisha & Chhattisgarh on 09th; East Madhya Pradesh on 10th September.
- ✓ **Very heavy rainfall** at isolated over Coastal Andhra Pradesh & Yanam & Telangana on 09th; Uttarakhand on 12th & 13th; Haryana-Chandigarh-Delhi on 12th; West Uttar Pradesh, Nagaland, Manipur, Mizoram & Tripura during 11th -13th; East Uttar Pradesh, West Madhya Pradesh on 10th & 11th; East Rajasthan on 11th & 12th; East Madhya Pradesh during 09th -11th; Vidarbha, Odisha on 10th; Assam & Meghalaya on 12th & 13th September.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand and Vidarbha; **Moderate to high flash flood risk** likely over few watersheds & neighbourhoods of Chhattisgarh, East Madhya Pradesh and Odisha on 09th & 10th September.
(ANNEXURE I)

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

- ✓ Postpone transplanting of rice in North Coastal **Andhra Pradesh**.
- ✓ Drain out excess water from rice, soybean, red gram, maize, cotton and turmeric in **Telangana**; from rice, finger millet, maize and groundnut in **Odisha**; from rice, maize, sugarcane, black gram, horse gram and niger crops in **Chhattisgarh** to prevent water logging.
- ✓ 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, Haryana, East Rajasthan, Gangetic West Bengal, Sub Himalayan West Bengal, Jharkhand, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Vidarbha, Gujrat region, Kerala, and 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 1730 IST of 10-09-2024 :

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

Vidarbha – Bhandara, Gadchiroli, Gondiya and Nagpur

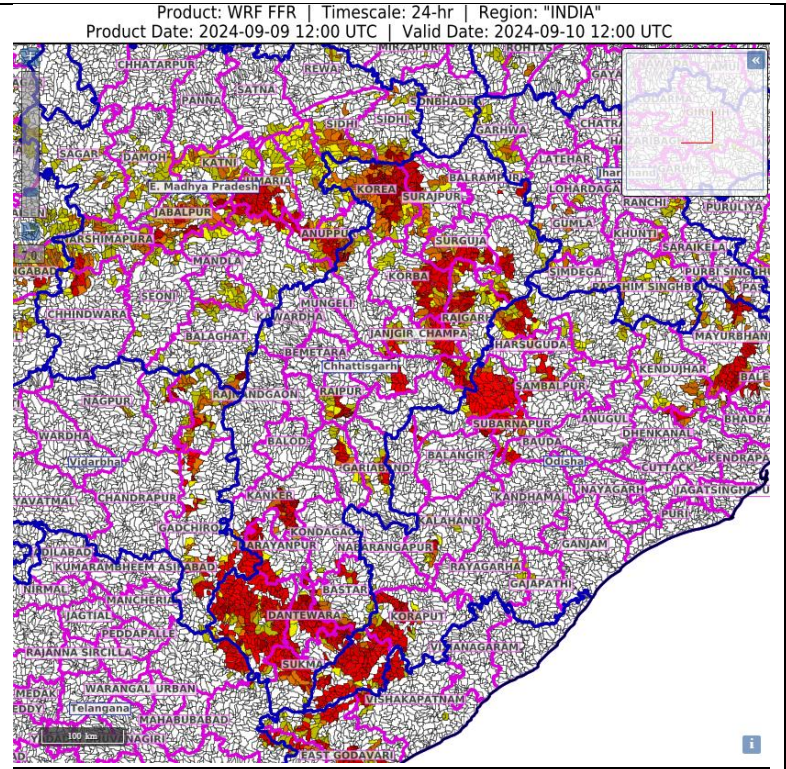
Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Chhattisgarh - Rajnandgaon, Bastar, Bijapur, Baloda Bazar, Bilaspur, Dantewara, Dhamtari, Gariaband, Janjgir, Champa, Kanker, Kondagaon, Mungeli, Narayanpur, Raigarh, Korba, Jashpur Korea and Sukma districts.

Odisha – Jharsuguda, Baragarh, Sambhalpur, and Koraput districts.

East Madhya Pradesh -Anuppur, Balaghat, Chhindwara, , Damoh, Dindori, Jabalpur, Katni, Mandla, , Narshimapura, Niwari, Rewa, Sagar, Shahdol, Sidhi, Singrauli, 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.



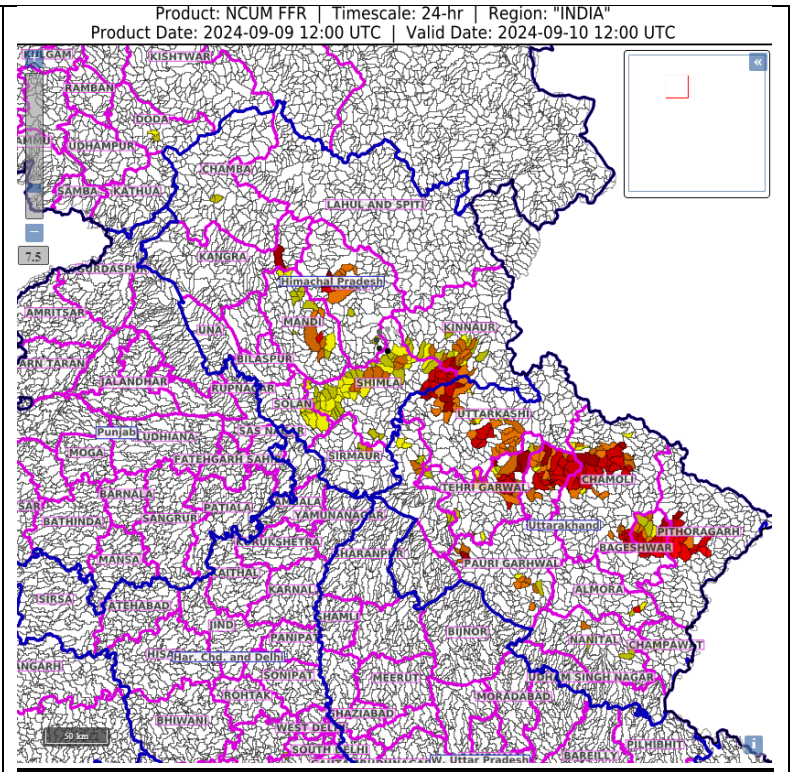
24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 10-09-2024 :

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

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

Uttarakhand - Bageshwar, Chamoli, Dehradun, 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:

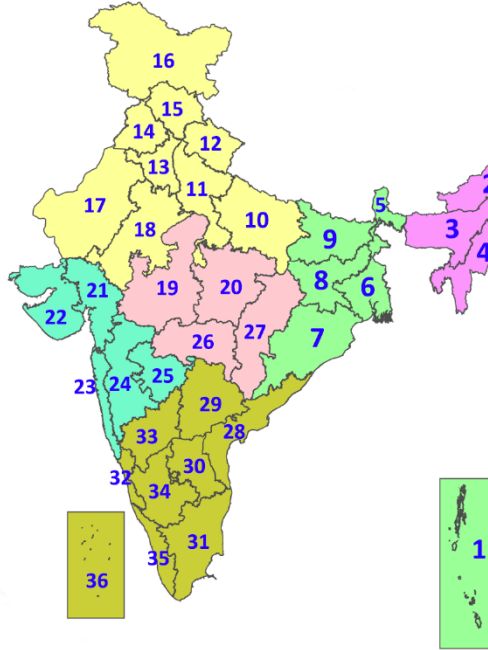
- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **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.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.



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

DEFINITION/CRITERIA

Rain/ Snow *	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heavy: 64.5 to 115.5 mm/cm *</td> </tr> <tr> <td style="padding: 2px;">Very Heavy: 115.6 to 204.4 mm/cm*</td> </tr> <tr> <td style="padding: 2px;">Extremely Heavy: > 204.4 mm/cm *</td> </tr> </table>	Heavy: 64.5 to 115.5 mm/cm *	Very Heavy: 115.6 to 204.4 mm/cm*	Extremely Heavy: > 204.4 mm/cm *		
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Very Heavy: 115.6 to 204.4 mm/cm*						
Extremely Heavy: > 204.4 mm/cm *						
Heat Wave	<p>When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C.</td> </tr> <tr> <td style="padding: 2px;">Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$</td> </tr> </table> <p>(b). Based on Actual maximum temperature</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.</td> </tr> <tr> <td style="padding: 2px;">Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$</td> </tr> </table> <p>(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 $\geq 37^\circ\text{C}$</p>	Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .	Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$	Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.	Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$	
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Warm Night	<p>When maximum temperature remains 40°C</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Warm Night: When minimum temperature departure 4.5°C to 6.4°C.</td> </tr> <tr> <td style="padding: 2px;">Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.</td> </tr> </table>	Warm Night: When minimum temperature departure 4.5°C to 6.4°C .	Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.			
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Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Moderate Fog: When the visibility between 500-200 metres</td> </tr> <tr> <td style="padding: 2px;">Dense Fog: when the visibility between 50- 200 metres</td> </tr> <tr> <td style="padding: 2px;">Very Dense Fog: when the visibility < 50 metres</td> </tr> </table>	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		
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Thunderstorm	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>					
Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>					
Frost	<p>Ice deposits on ground</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Air temperature $\leq 4^\circ\text{C}$ (over Plains)</td> </tr> </table>	Air temperature $\leq 4^\circ\text{C}$ (over Plains)				
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Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Moderate: Wind speed 52-61 kmph</td> </tr> <tr> <td style="padding: 2px;">Severe: Wind speed 62-87 kmph</td> </tr> <tr> <td style="padding: 2px;">Very Severe: Wind speed >87 kmph</td> </tr> </table>	Moderate: Wind speed 52-61 kmph	Severe: Wind speed 62-87 kmph	Very Severe: Wind speed >87 kmph		
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Sea State	<p>Effect of various waves in the sea over specific area</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre</td> </tr> <tr> <td style="padding: 2px;">High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre</td> </tr> <tr> <td style="padding: 2px;">Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre</td> </tr> </table>	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		
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