Annexure I

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Wednesday, September 11, 2024
Time of Issue: 1945 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:

11 September (Day 1):

- **Heavy to very heavy rainfall (≥12 cm) with extremely heavy falls (>20 cm)** very likely at isolated places over East Rajasthan, Madhya Pradesh, West Uttar Pradesh; **Heavy to very heavy rainfall (≥12 cm)** at isolated places over Uttarakhand, East Uttar Pradesh, Assam & Meghalaya, Gujarat Region, Mizoram & Tripura; Heavy **rainfall (≥7 cm)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, West Rajasthan, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Punjab, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Odisha, Arunachal Pradesh, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, West Rajasthan.

- **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over few parts of east central and west central Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, most parts of south Bay of Bengal, many parts of central Bay of Bengal. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of manner. **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, along and off Tamil Nadu coast. Fishermen are advised not to venture into these areas.

12 September (Day 2):

- **Heavy to very heavy rainfall (≥12 cm) with extremely heavy falls (>20 cm)** very likely at isolated places over Uttarakhand, Uttar Pradesh, West Madhya Pradesh; **Heavy to very heavy rainfall (≥12 cm)** very likely at isolated places over Haryana-Chandigarh, East Rajasthan, East Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥7 cm)** at isolated places over Himachal Pradesh, West Rajasthan, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Rajasthan, Chhattisgarh, West Bengal & Sikkim, Bihar, Odisha, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal.

- **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of west central Arabian sea and adjoining east central Arabian sea, northern parts of southwest Arabian sea, off Sri Lanka coast, many parts of south and central Bay of Bengal, northeast Bay of Bengal. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over gulf of manner, Tamil Nadu coast. 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 3):

- **Heavy to very heavy rainfall (≥12 cm) with extremely heavy falls (>20 cm)** very likely at isolated places over Uttarakhand, West Uttar Pradesh; **Heavy to very heavy rainfall (≥12 cm)** very likely at isolated places over East Rajasthan, West Madhya Pradesh, Gangetic West Bengal, Assam & Meghalaya, Mizoram, Tripura; **Heavy rainfall (≥7 cm)** at isolated places over Himachal Pradesh, Haryana-Chandigarh, East Uttar Pradesh, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Odisha.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh.

- **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over central parts of central Arabian sea, over gulf of manner, off Sri Lanka coast, many parts of south and central Bay of Bengal, northeast & adjoining northwest Bay of Bengal, along and off west Bengal coast. **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 4):

- **Heavy to very heavy rainfall (≥12 cm)** likely at isolated places over West Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥7 cm)** likely at isolated places over Uttarakhand, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Gangetic West Bengal, Bihar, Odisha, Arunachal Pradesh.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.

- **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over central parts of central Arabian sea, over gulf of manner, off Sri Lanka coast, many parts of south and central Bay of Bengal, northeast & adjoining northwest Bay of Bengal, along and off west Bengal coast. **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.

15 September (Day 5):

- **Heavy rainfall (≥7 cm)** likely at isolated places over Uttar Pradesh, West Madhya Pradesh, Chhattisgarh, Jharkhand, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.

- **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Chhattisgarh.

- **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of west central Arabian sea and adjoining parts of east central Arabian sea, over gulf of manner, off Sri Lanka coast, most 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 Bay of Bengal & adjoining parts. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest and Westcentral Arabian sea, along and off Somalia coast.

16 September (Day 6):

- **Heavy rainfall (≥7 cm)** likely at isolated places over Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.

17 September (Day 7):

- **Heavy rainfall (≥7 cm)** likely at isolated places over Assam & Meghalaya, Chhattisgarh.

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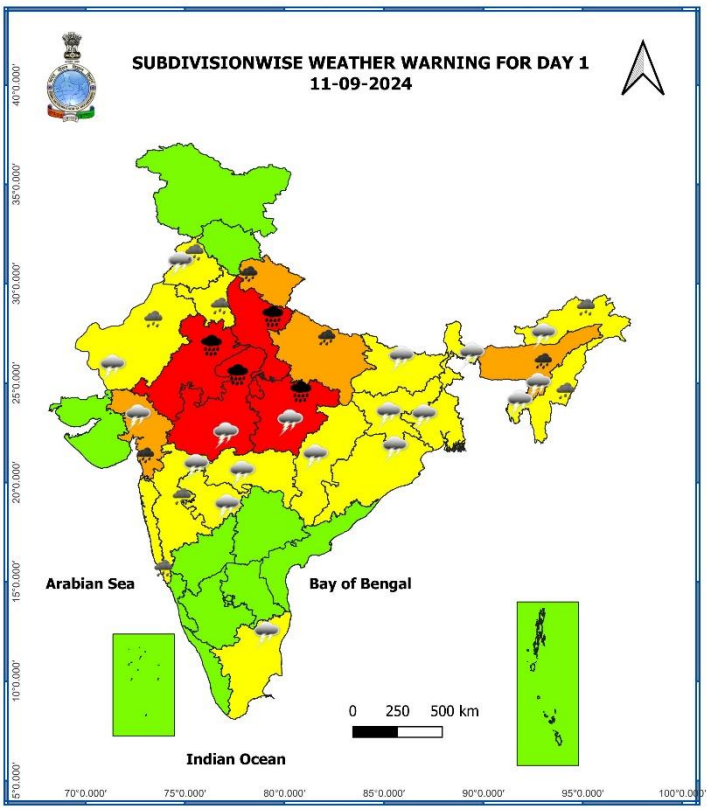

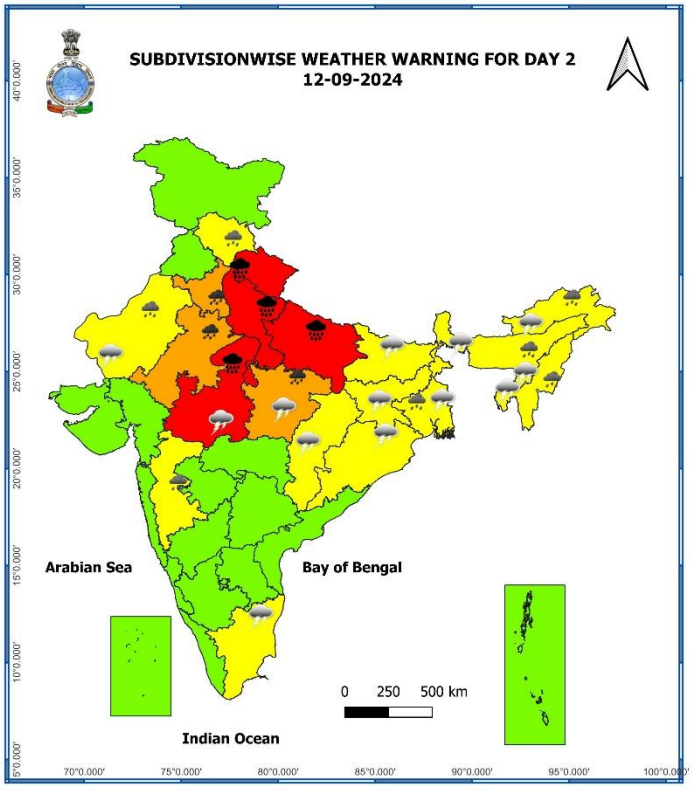

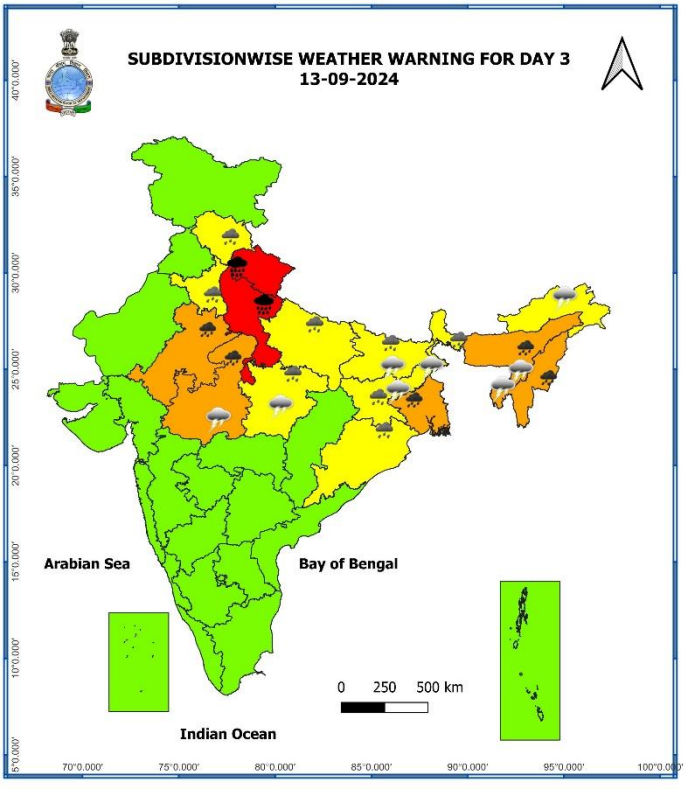

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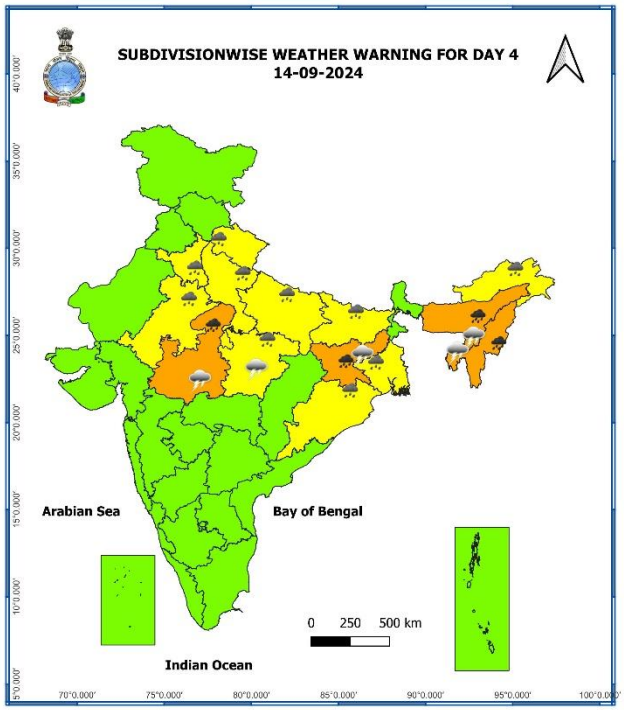

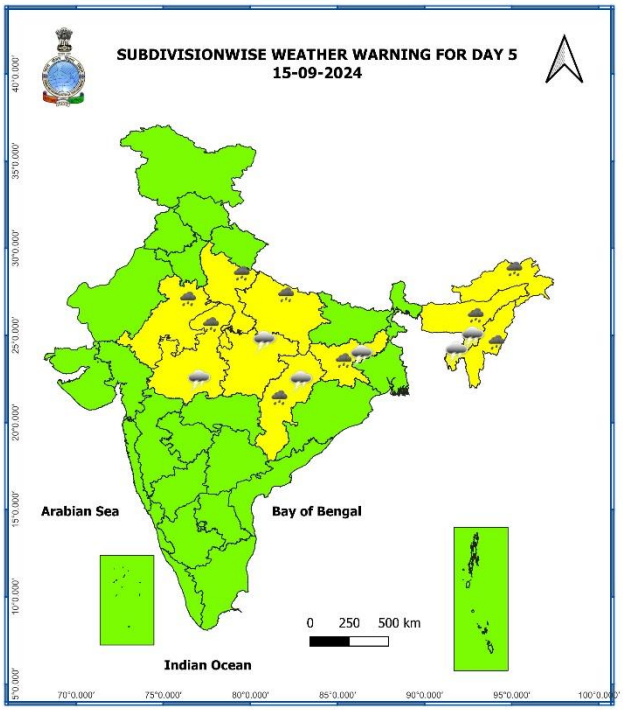

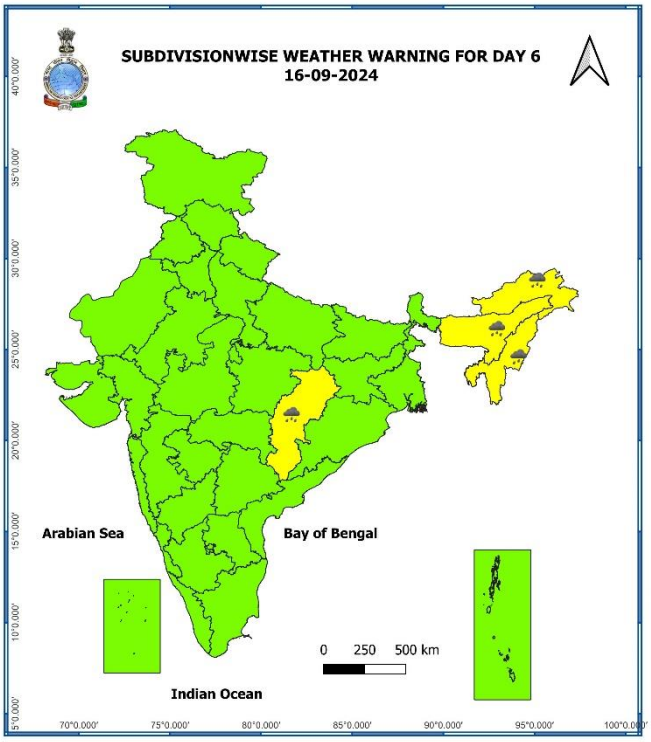

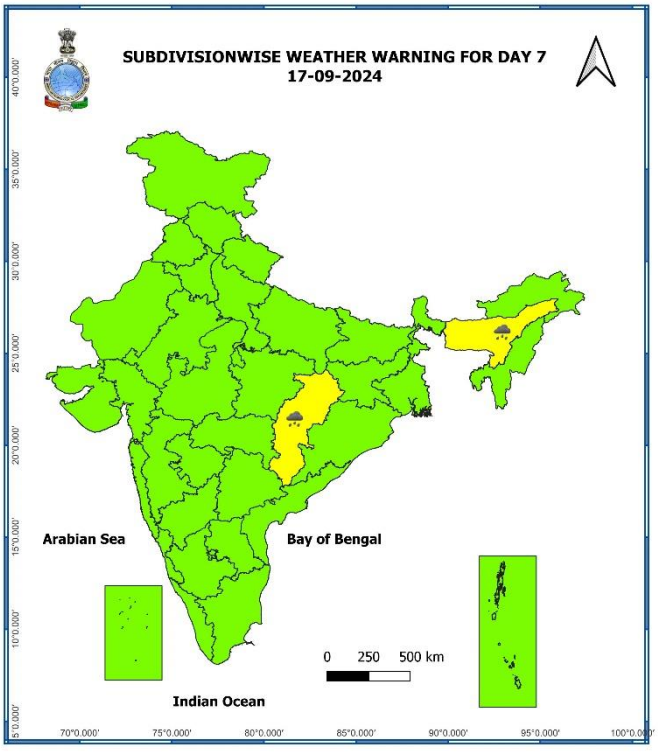

- **Action may be taken based on ORANGE AND RED COLOUR warnings.**
- **Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.**
- **As the lead period increases forecast accuracy decreases.**

Annexure-I

Table-1

-

7 Days Rainfall Forecast								
S. No.	Subdivision	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	SCT	FWS	WS	WS	FWS	FWS	FWS
2	ARUNACHAL PRADESH	FWS	SCT	SCT	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	WS	WS	WS	FWS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	WS	WS	WS	WS	WS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	SCT	FWS	WS	FWS	FWS	SCT	SCT
6	GANGETIC WEST BENGAL	WS	WS	WS	WS	FWS	SCT	SCT
7	ODISHA	SCT	SCT	FWS	FWS	SCT	SCT	SCT
8	JHARKHAND	FWS	FWS	WS	WS	WS	FWS	SCT
9	BIHAR	SCT	SCT	FWS	FWS	SCT	SCT	SCT
10	EAST UTTAR PRADESH	WS	WS	FWS	FWS	FWS	FWS	FWS
11	WEST UTTAR PRADESH	WS	WS	WS	WS	FWS	SCT	SCT
12	UTTARAKHAND	WS	WS	WS	WS	SCT	SCT	SCT
13	HARYANA CHANDIGARH & DELHI	FWS	FWS	FWS	SCT	ISOL	ISOL	ISOL
14	PUNJAB	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
15	HIMACHAL PRADESH	FWS	SCT	FWS	ISOL	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
17	WEST RAJASTHAN	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	FWS	FWS	FWS	SCT	SCT	SCT	ISOL
19	WEST MADHYA PRADESH	WS	WS	FWS	FWS	FWS	SCT	SCT
20	EAST MADHYA PRADESH	WS	WS	FWS	FWS	FWS	SCT	SCT
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	FWS
24	MADHYA MAHARASHTRA	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	FWS	FWS	SCT	SCT	SCT	SCT	SCT
27	CHHATTISGARH	SCT	SCT	SCT	SCT	SCT	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	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	FWS	FWS	FWS	SCT
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	FWS	FWS	SCT	SCT	SCT	SCT
36	LAKSHADWEEP	FWS	FWS	FWS	SCT	SCT	SCT	SCT

- **As the lead period increases forecast accuracy decreases.**

Impact due to

- ✓ Isolated **extremely heavy rainfall** very likely over East Rajasthan on 11th, West Uttar Pradesh during 11th -13th; Uttarakhand on 12th & 13th; East Uttar Pradesh on 12th September. West Madhya Pradesh on 11th & 12th; East Madhya Pradesh on 11th; Nagaland, Manipur, Mizoram & Tripura on 13th September.
- ✓ **Very heavy rainfall** at isolated places over Mizoram & Tripura, Gujarat Region on 11th; Uttarakhand, West Uttar Pradesh, East Rajasthan during 12th -13th; East Uttar Pradesh on 11th & 12th; West Madhya Pradesh in 13th & 14th; East Madhya Pradesh on 12th; Assam & Meghalaya on 11th, 13th & 14th; Nagaland, Manipur, Mizoram & Tripura during 12th -14th; Gangetic West Bengal on 13th; Jharkhand on 14th September.
- ✓ **Moderate to High flash flood risk** likely over Uttarakhand, West Uttar Pradesh, Madhya Pradesh on 11th & 12th 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.
- ✓ Disruption of traffic in major cities and roadways 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 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 cotton, maize, soybean, pulses and vegetables in **Madhya Pradesh;** from maize, sorghum, pearl millet, groundnut, pulses and vegetables in **East Rajasthan;** from rice, groundnut, sesame, arhar, black gram and vegetables in **West Uttar Pradesh**; from rice, banana, cotton, pigeon pea, castor in **Gujarat** region to prevent water logging**.**
- ➢ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Arunachal Pradesh, Uttarakhand, Konkan & Goa and Madhya Maharashtra.
- ➢ Provide mechanical support to horticultural crops & staking to vegetables.
- ➢ Keep the harvested produce at safer place.

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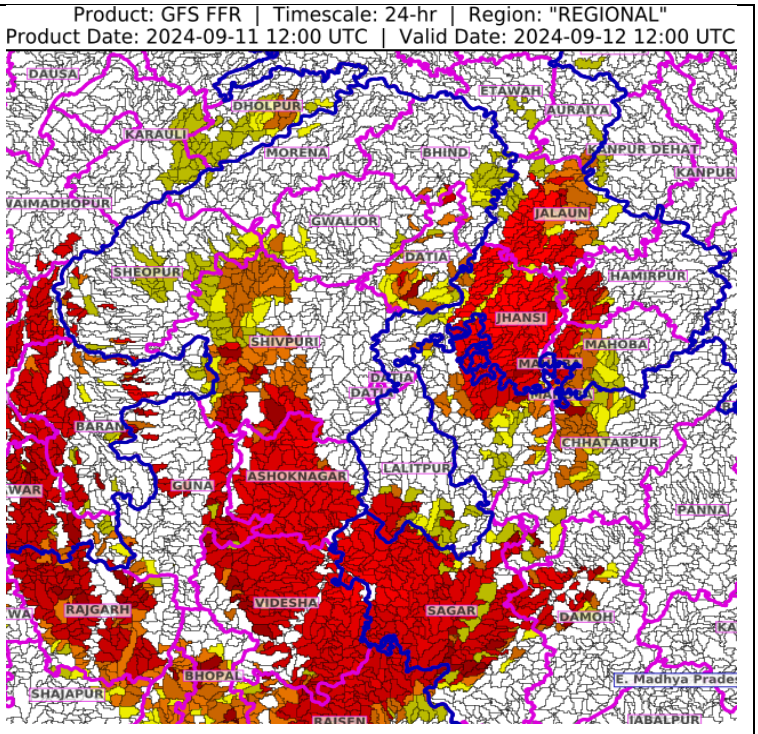
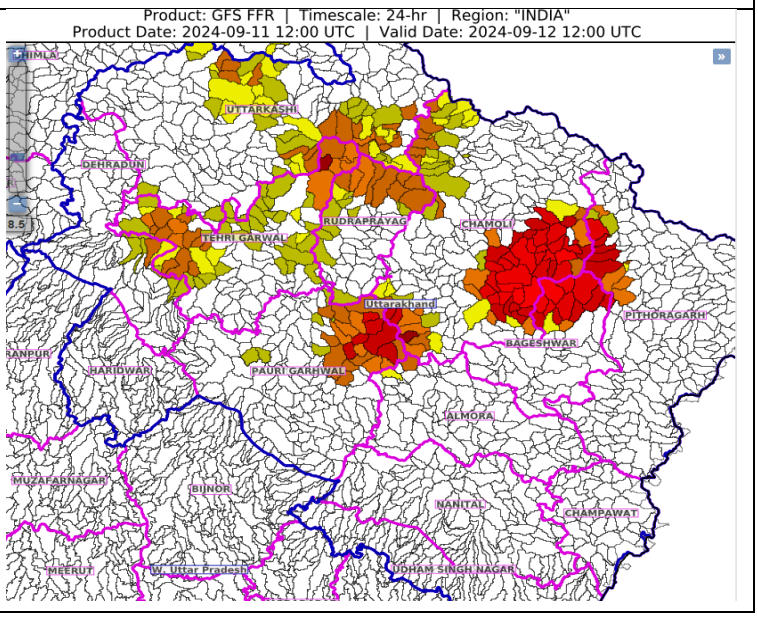
ANNEXURE I

Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 12-09-2024 : **Moderate to High flash flood risk** likely over few watersheds & neighbourhoods of **West Uttar Pradesh** - Auraiya, Etah, Hamirpur, Jalaun, Jhansi, Lalitpur and Mahoba districts. **East Madhya Pradesh** - Chhatarpur, Damoh and Sagar districts.**West Madhya Pradesh** - Ashoknagar, Bhind, Bhopal, Datia, Guna, Morena, Rajgarh, Sheopur, Shivpuri and Videsha districts. 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.	
24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 12-09-2024 : **Moderate to High flash flood risk** likely over few watersheds & neighbourhoods of **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 AoC as shown in map due to expected rainfall occurrence in next 24 hours.	

Annexure-I

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.

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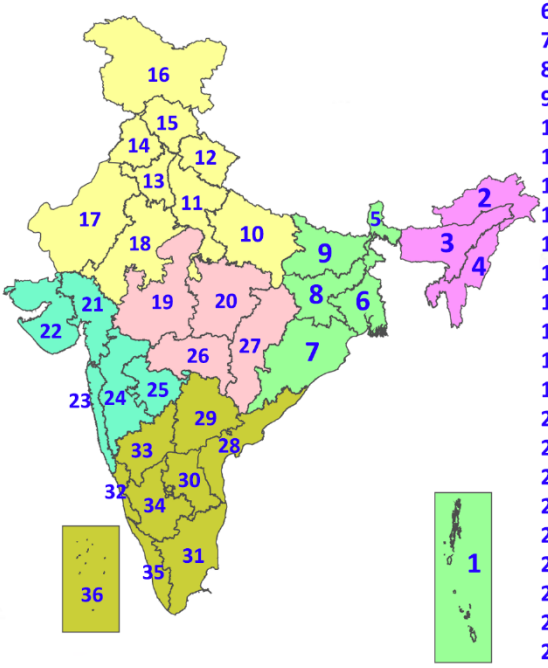
LEGENDS

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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds

Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds

Cold Wave
Cold Day
Ground Frost

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.
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(Service to the Nation since 1875)

Annexure I

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

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 ≥40° C for plains and ≥30° 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 ≥6.5° C **(b). Based on Actual maximum temperature** **Heat Wave:** When actual maximum temperature ≥45°C. **Severe Heat Wave:** When actual maximum temperature ≥47°C **(c). Criteria for heat wave for coastal stations** When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.
Cold Wave	**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C **(b) Based on actual Minimum Temperature (for Plains only)** **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C **(c) For Coastal Stations** When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C
Cold Day	**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C
Fog	**Phenomenon of small droplets suspended in air and the horizontal visibility < 1km** **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 ≤4°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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