



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 15th September, 2024

Time of Issue: 1345 hours IST

Subject: Deep depression over Gangetic West Bengal and is likely to move nearly westwards and cause isolated very heavy to extremely heavy rainfall over Jharkhand, Gangetic West Bengal, Odisha and Bihar on 15th & 16th September.

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

Heavy to very heavy rainfall at isolated places over Gangetic West Bengal, Jharkhand, Odisha and Bihar; **Heavy rainfall** at isolated places over West Uttar Pradesh, Chhattisgarh, Sub-Himalayan West Bengal.

Weather Systems:

- ✓ Yesterday's deep depression over Gangetic West Bengal & adjoining Bangladesh moved slowly westward and lay centered at 0830 hours IST of today, the 15th September 2024 over Gangetic West Bengal near latitude 22.6° N and longitude 87.8° E, about 60 km west of Kolkata (West Bengal), 110 km southeast of Bankura (West Bengal), 170 km east of Jamshedpur (Jharkhand) and 270 km east-southeast of Ranchi (Jharkhand). It is likely to move slowly, nearly westwards across Gangetic West Bengal and maintain its intensity of deep depression till evening of today, the 15th September. Thereafter, it is likely to weaken gradually into a depression and move nearly westwards across Jharkhand and North Chhattisgarh during subsequent 48 hours.
- ✓ A cyclonic circulation lies over northwest Uttar Pradesh & adjoining Haryana in lower tropospheric levels.
- ✓ The western end of monsoon trough is north of its normal position and eastern end is near its normal position.

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

West & Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Madhya Pradesh, Konkan & Goa; Scattered to Fairly widespread light/moderate rainfall very likely over Chhattisgarh; Isolated to Scattered light/moderate rainfall very likely over Vidarbha, Madhya Maharashtra, Marathwada & Gujarat State during the week.
- ✓ **Isolated very heavy rainfall** very likely over Chhattisgarh on 15th & 16th; East Madhya Pradesh during 16th -18th September.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh on 17th; East Madhya Pradesh on 15th and West Madhya Pradesh on 17th & 18th September.

East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over East India; Scattered to Fairly widespread light/moderate rainfall very likely over Northeast India during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Jharkhand, Gangetic West Bengal & north Odisha on 15th September.
- ✓ **Isolated very heavy rainfall** very likely over Bihar on 15th & 16th and over Jharkhand and Odisha on 16th September.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh on 15th; Gangetic West Bengal on 16th; Bihar on 17th; Jharkhand, Odisha on 16th; Nagaland, Manipur, Mizoram & Tripura on 15th, 18th, 19th & 21st; Assam & Meghalaya on 15th, 18th & 19th September.

Northwest India

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Uttar Pradesh; Isolated to scattered rainfall over the remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely over Uttarakhand on 17th; East Uttar Pradesh during 15th -18th and over West Uttar Pradesh on 17th & 18th September.

South Peninsular India:

- ✓ Scattered to Fairly widespread light/moderate rainfall over Coastal Karnataka, Kerala & Mahe, Lakshadweep; Isolated to Scattered rainfall over the remaining region during the week.

Wind warning

- ✓ Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to over north Bay of Bengal and along & off Bangladesh, West Bengal, and north Odisha coasts till night of 15th September. It is likely to become 40-50 kmph gusting to 60 kmph till evening of 16th September and decrease thereafter.
- ✓ Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over Gangetic West Bengal and adjoining Jharkhand & north Odisha till night of 15th September, decrease gradually becoming 45-55 kmph gusting to 65 kmph likely over Jharkhand and adjoining Gangetic West Bengal & north Odisha from morning of 16th September and decrease thereafter.

For more details, kindly refer:

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

For District wise warnings refer:

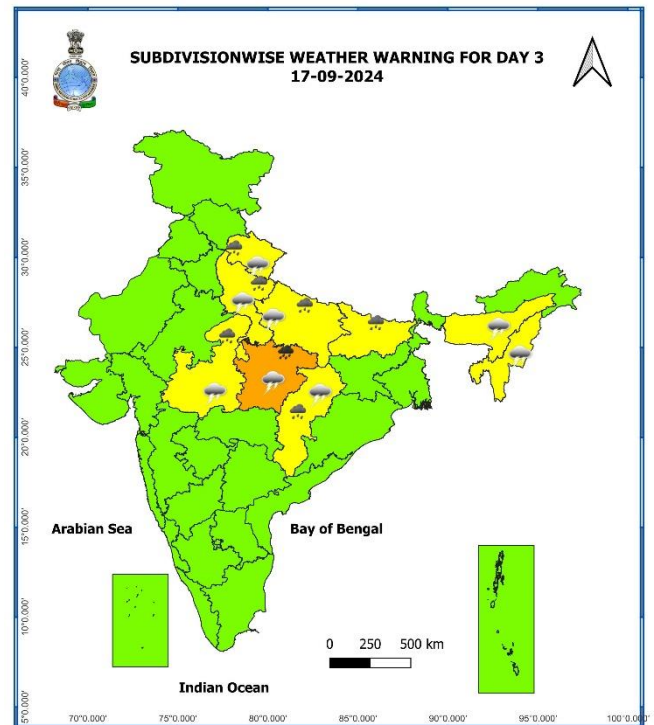
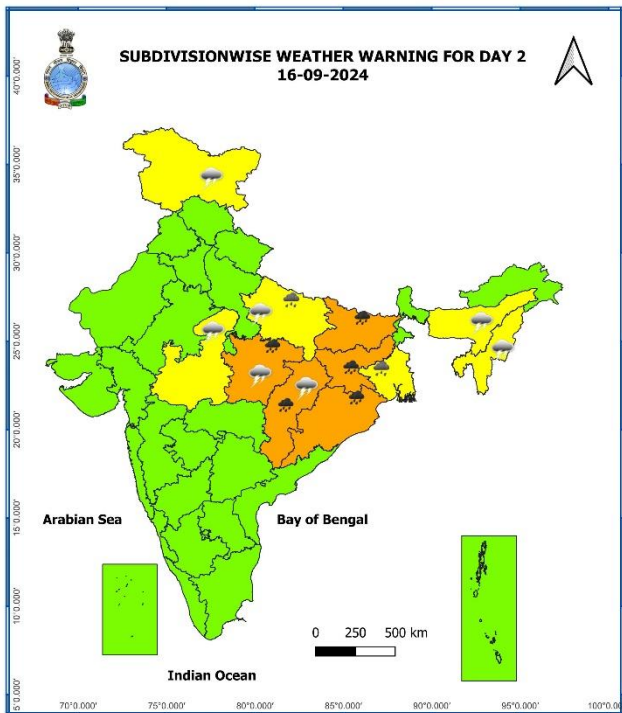
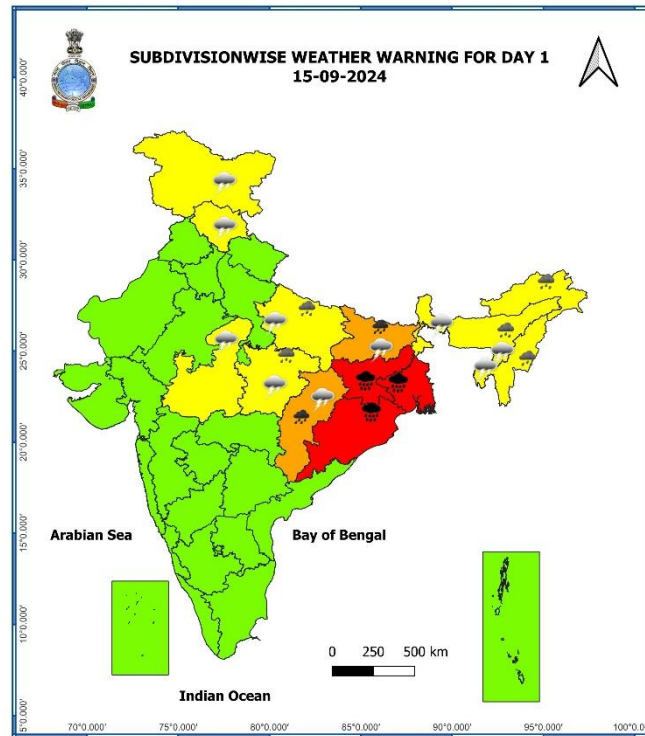
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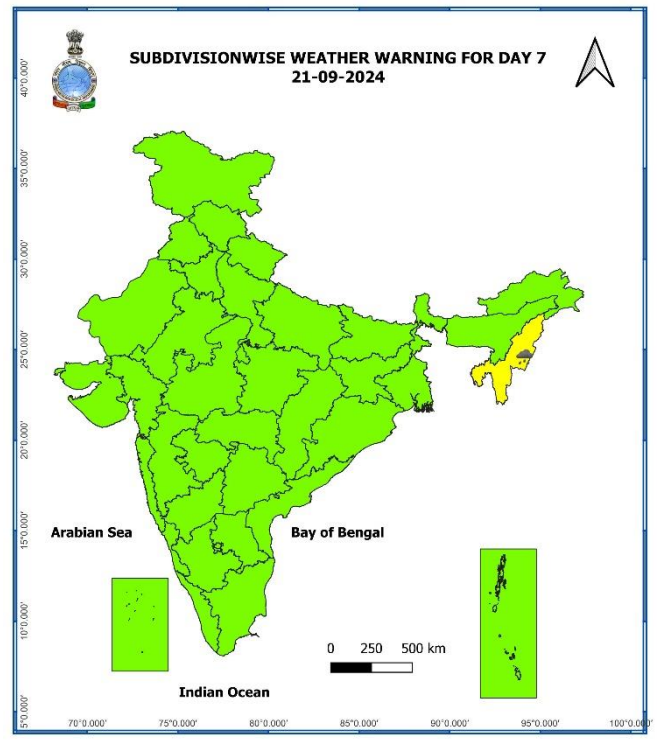
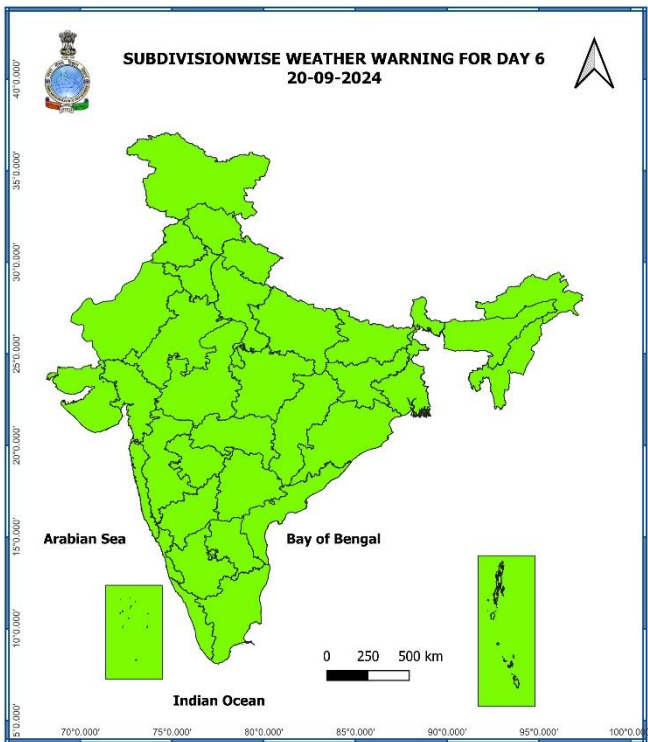
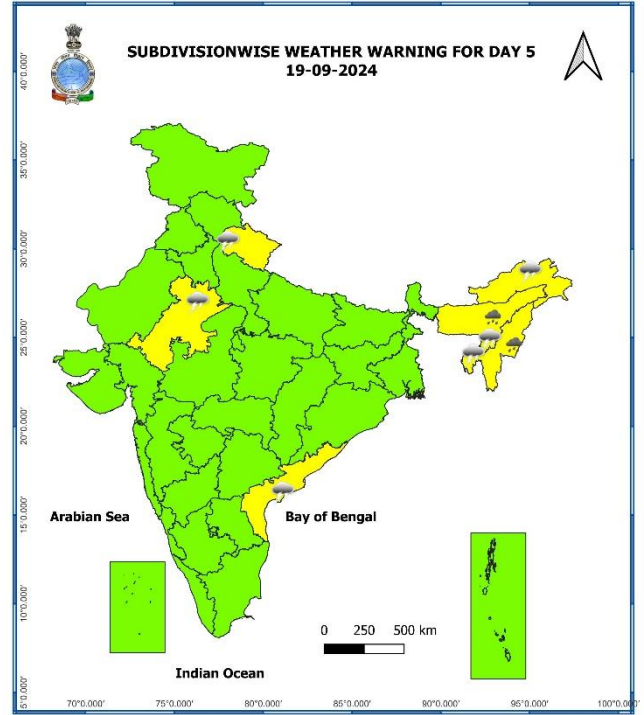
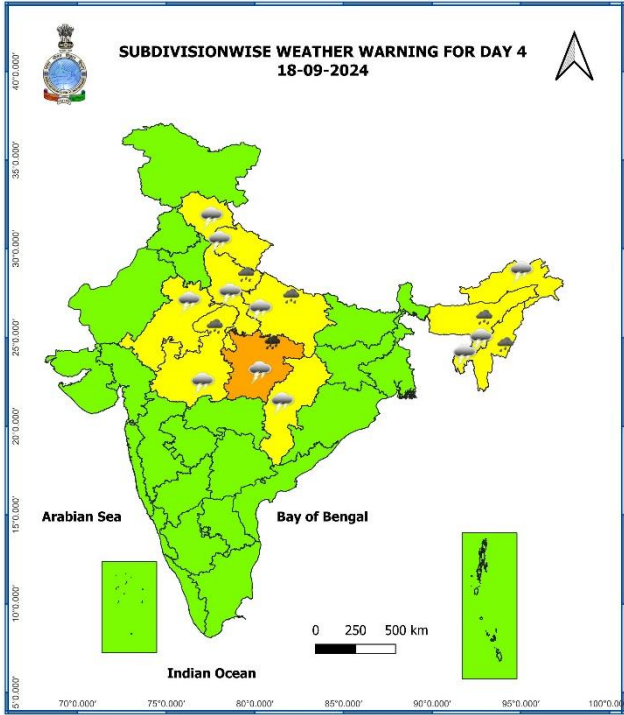
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 15.09.2024 (in cm):

- ❖ **Gangetic West Bengal:** Jhargram (pto) (dist Jhargram) 19, Contai (dist East Midnapore) 15, Amtala (dist Murshidabad) 14, Kharidwar (dist Purulia) 13, Bankura(cwc) (dist Bankura) 13, Lalgargh (dist Jhargram) 13, Kansabati Dam (dist Bankura) 13, Kalyani Smo (dist Nadia) 12, Tusuma (dist Purulia) 12, Digha (dist East Midnapore) 12, Asansol (dist Paschim Bardhaman) 11, Phulberia (dist Purulia) 11, D.p.ghat (dist Jhargram) 11, Asansol(cwc) (dist Paschim Bardhaman) 11, Bagati (dist Hooghly) 11, Bankura (dist Bankura) 11, Amfu Kharagpur (dist West Midnapore) 10, Panagarh (iaf) (dist Paschim Bardhaman) 9, Barrackpur(Iaf) (dist North 24 Parganas) 9, Harinkhola (dist Hooghly) 9, Narayanpur (dist Birbhum) 9, Debagram (dist Nadia) 9, Mohanpur (dist West Midnapore) 9, Midnapore(cwc) (dist West Midnapore) 9, Durgachack (dist East Midnapore) 9, Basirhat(pt) (dist North 24 Parganas) 8, Midnapore (dist West Midnapore) 8, Burnpur (dist Paschim Bardhaman) 8, Sri Niketan (dist Birbhum) 8, Purihansa (dist Purulia) 8, Durgapur (dist Paschim Bardhaman) 8, Hetampur (dist Birbhum) 8, Suri (cwc) (dist Birbhum) 7, Salar (dist Murshidabad) 7, Luchipur (dist Paschim Bardhaman) 7, Burdwan (pto) (dist Purba Bardhaman) 7, Labpur (dist Birbhum) 7, Amfu Kakdwip (dist South 24 Parganas) 7, Rajnagar (dist Birbhum) 7, Gheropara (dist Birbhum) 7
- ❖ **Jharkhand:** Meral (dist Garhwa)-15, Garhwa (dist Garhwa) 14, Burmu (dist Ranchi) 11, Daltonganj (dist Palamu) 11, Chakulia (dist East Singbhum) 11, Potka (dist East Singbhum) 9, Dhalbhumgarh (dist East Singbhum) 9, Garu (dist Latehar) 9, Palamu Dtg Kvk Aws (dist Palamu) 9, Latehar Balumat Kvk Aws (dist Latehar) 9, Panchet (dist Dhanbad) 8, Boram (dist East Singbhum) 7, Panchet Dvc (dist Dhanbad) 7, Rajdhanwar (dist Giridih) 7, Nandadih (dist Giridih) 7, Maithon Dvc (dist Dhanbad) 7, Gurabandha (dist East Singbhum) 7, Chandwa (dist Latehar) 7, Hendigir (dist Hazaribag) 7, Messenjoy (dist Dumka) 7, Saryu (dist Latehar) 7,
- ❖ **Bihar:** Indrapuri (dist Rohtas) 14, Dumaria (dist Gaya) 12, Nabinagar (dist Aurangabad) 12, Kutumba (dist Aurangabad) 11, Nawkothe (dist Begusarai) 11, Udai Kishanganj (dist Madhepura) 11, Monghyr (dist Monghyr) 11, Chautham (dist Khagaria) 10, Begusarai (dist Begusarai) 8, Dharhara (dist Monghyr) 8, Rohtas (dist Rohtas) 7, Bind (dist Nalanda) 7, Jhajha (dist Jamui) 7, Bokhara (dist Sitamarhi) 7, Garhi (dist Jamui) 7, Banka (dist Banka) 7, Bhagwanpur (dist Begusarai) 7, Nawada (dist Nawada) 7, Deo (dist Aurangabad) 7, Baltara (dist Khagaria) 7,
- ❖ **Odisha:** Bhograi (Balasore) 13, Rajghat (Balasore) 12, Suliapada (Mayurbhanj) 11, Udala (Mayurbhanj) 10, Jaleswar (Balasore) 10, Tensa (Sundargarh) 9, Rasagovindapur (Mayurbhanj) 8, Betanati (Mayurbhanj) 8, Chandua Kuliana (Mayurbhanj) 8, Kaptipada (Mayurbhanj) 8, Jamsolaghat (Mayurbhanj) 8, Bangiriposi (Mayurbhanj) 8, Sarasakana (Mayurbhanj) 7, Bijatala (Mayurbhanj) 7, G B Nagar (Mayurbhanj) 7,
- ❖ **West Uttar Pradesh:** Saharanpur (dist Saharanpur) 10,
- ❖ **Chhattisgarh:** Kusmi (dist Balrampur) 7,
- ❖ **Sub-Himalayan West Bengal:** Darjeeling (dist Darjeeling) 7

7 Days Rainfall Forecast								
S. No.	Subdivision	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	FWS	SCT	SCT	SCT	SCT	SCT	SCT
3	ASSAM & MEGHALAYA	FWS	SCT	SCT	SCT	SCT	SCT	SCT
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	SCT	SCT	FWS	FWS	SCT	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	SCT	SCT	SCT	SCT	SCT	SCT
6	GANGETIC WEST BENGAL	WS	FWS	SCT	SCT	SCT	SCT	SCT
7	ODISHA	FWS	FWS	SCT	FWS	FWS	FWS	SCT
8	JHARKHAND	WS	WS	SCT	SCT	SCT	SCT	SCT
9	BIHAR	WS	FWS	SCT	ISOL	ISOL	ISOL	SCT
10	EAST UTTAR PRADESH	SCT	FWS	FWS	SCT	ISOL	ISOL	ISOL
11	WEST UTTAR PRADESH	ISOL	ISOL	SCT	FWS	ISOL	ISOL	ISOL
12	UTTARAKHAND	ISOL	ISOL	FWS	FWS	SCT	SCT	SCT
13	HARYANA CHANDIGARH & DELHI	ISOL	ISOL	ISOL	SCT	ISOL	ISOL	ISOL
14	PUNJAB	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
15	HIMACHAL PRADESH	SCT	ISOL	ISOL	SCT	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	ISOL	ISOL	ISOL	SCT	ISOL	ISOL	ISOL
19	WEST MADHYA PRADESH	SCT	SCT	FWS	FWS	FWS	FWS	WS
20	EAST MADHYA PRADESH	SCT	FWS	WS	FWS	SCT	FWS	FWS
21	GUJARAT REGION	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
22	SAURASHTRA & KUTCH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
23	KONKAN & GOA	WS	WS	WS	FWS	FWS	WS	WS
24	MADHYA MAHARASHTRA	SCT	ISOL	ISOL	ISOL	SCT	SCT	FWS
25	MARATHAWADA	ISOL	ISOL	ISOL	ISOL	SCT	FWS	FWS
26	VIDARBHA	ISOL	ISOL	SCT	SCT	FWS	FWS	FWS
27	CHHATTISGARH	FWS	FWS	FWS	SCT	SCT	SCT	SCT
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
29	TELANGANA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	FWS	FWS	FWS	FWS	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	FWS	SCT	SCT	SCT	SCT	SCT	SCT
36	LAKSHADWEEP	FWS	SCT	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 Jharkhand, Gangetic West Bengal & north Odisha on 15th September.
- ✓ **Very heavy rainfall** at isolated places over Bihar, Chhattisgarh on 15th & 16th; Jharkhand, Odisha on 16th; East Madhya Pradesh during 16th -18th September.
- ✓ **Moderate to high flash flood risk** likely over few watersheds & neighbourhoods of Odisha, Gangetic West Bengal, Jharkhand on 15th & 16th 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 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 rice, groundnut, brinjal, cucurbits and betel vine gardens in **Gangetic West Bengal**; from maize, green gram, black gram, rice, vegetables and other standing crops in **Odisha**; from pulse crops and vegetables in **Jharkhand**; from rice, black gram, green gram, orchards and vegetables in **Bihar**; from maize, pulses and millets 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 East Uttar Pradesh and East Madhya Pradesh.
- 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 16-09-2024:**

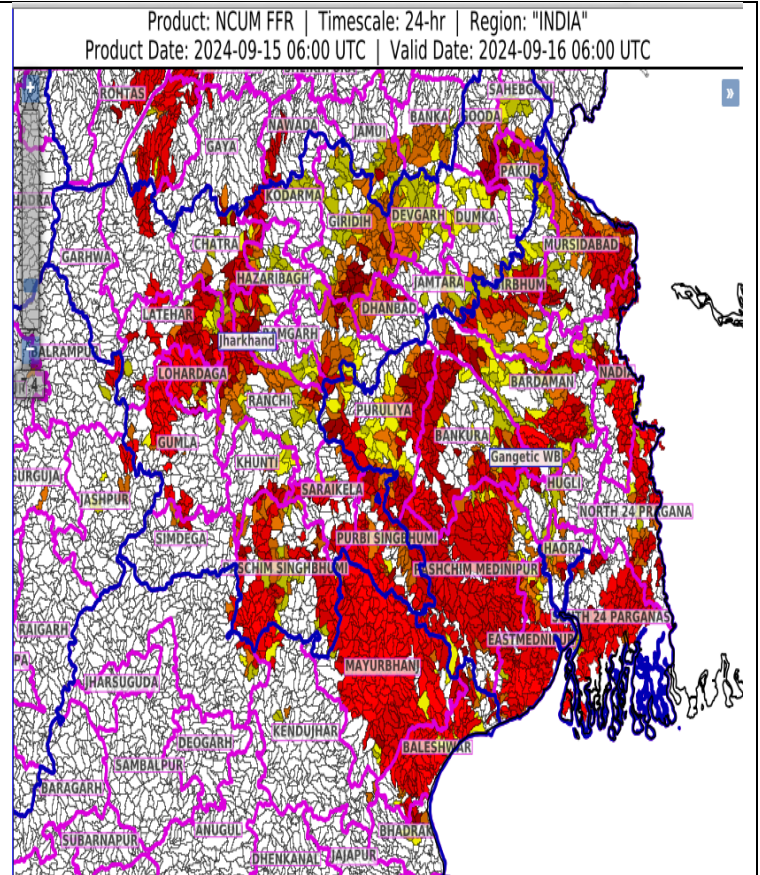
Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Odisha - Baleshwar, Mayurbhanj and Sundargarh districts.

Gangetic West Bengal - Bankura, Bardaman, Birbhum, Eastmednipur, Haora, Hugli, Kolkata, Mursidabad, Nadia, North 24 Pragana, Pashchim Medinipur, Puruliya and South 24 Parganas districts.

Jharkhand - Bokaro, Chatra, Deoghar, Dhanbad, Dumka, East Singhbhum, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Khunti, Koderma, Latehar, Lohardaga, Pakur, Palamu, Ramgarh, Ranchi, Sahebganj, Saraikela, Simdega and West Singhbhum 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.

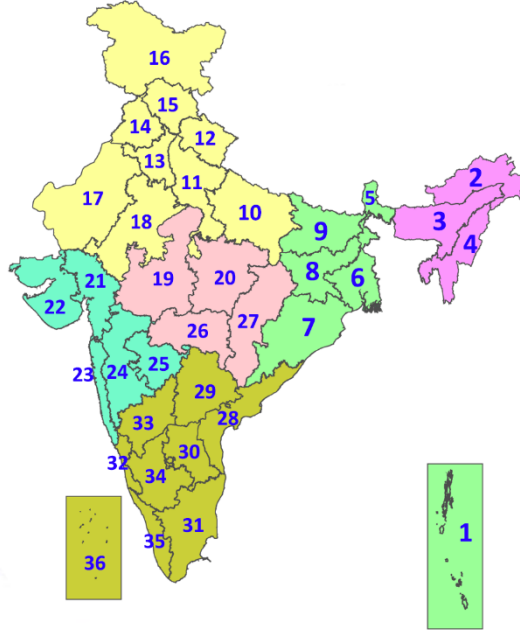


Legends & abbreviations:

- ❖ **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

* 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 Storm: 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)