



**India Meteorological Department
(Ministry of Earth Sciences)**

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TIME OF ISSUE: 1530 HOURS IST

DATED: 14.09.2024

**FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)
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Sub: Deep Depression over Gangetic West Bengal

The deep depression over Gangetic West Bengal and adjoining Bangladesh moved west-southwestwards with a speed of 18 kmph during past 6 hours and lay centered at 1130 hours IST of today, the 14th September 2024, over Gangetic West Bengal near latitude 22.4° N and longitude 88.3° E, 20 km south-southwest of Kolkata (West Bengal), 170 km southeast of Bankura (West Bengal), 220 km east-southeast of Jamshedpur (Jharkhand) and 320 km east-southeast of Ranchi (Jharkhand).

It is likely to move nearly westwards across Gangetic West Bengal and maintain its intensity of deep depression today, the 14th September. Thereafter, it will continue to move nearly westwards across Jharkhand and north Chhattisgarh as a depression during subsequent 48 hours.

The deep depression is under continuous surveillance by the Doppler Weather Radar at Kolkata.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Forecast track and intensity are given in the following table:

Date/Time (IST)	Position (Lat. °N/ Long. °E)	Maximum Sustained Surface Wind Speed (Kmph)	Category Of Cyclonic Disturbance
14.09.24/1130	22.4/88.3	50-60 gusting to 70	Deep Depression
14.09.24/1730	22.4/87.3	50-60 gusting to 70	Deep Depression
14.09.24/2330	22.5/86.2	50-60 gusting to 70	Deep Depression
15.09.24/0530	22.7/85.0	45-55 gusting to 65	Depression
15.09.24/1130	22.8/83.7	45-55 gusting to 65	Depression
15.09.24/2330	22.9/81.7	40-50 gusting to 60	Depression
16.09.24/1130	23.0/79.7	35-45 gusting to 55	Depression
16.09.24/2330	23.0/77.7	30-40 gusting to 50	Well Marked Low Pressure Area

Warnings:

(i) Rainfall warning

Gangetic West Bengal (including Kolkata): Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at few places over Gangetic West Bengal and **extremely heavy rainfall** at isolated places over south Gangetic West Bengal on 14th; **heavy rainfall** at isolated places on 15th September.

Sub-Himalayan West Bengal: Light to moderate rainfall at most places is very likely with **heavy rainfall** at isolated places on 14th September.

Odisha: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places over Odisha and **extremely heavy rainfall** at isolated places over north Odisha on 14th and **heavy to very heavy rainfall** at isolated places on 15th and **heavy rainfall** at isolated places over Odisha 16th September.

Jharkhand: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places and **extremely heavy rainfall** over south Jharkhand on 14th & 15th and **heavy rainfall** at isolated places over Odisha 16th September.

Bihar: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places very likely on 14th & 15th and **heavy rainfall** at isolated places over Odisha 16th September.

Chhattisgarh: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places on 14th & 15th and **Extremely very heavy rainfall** over north Chhattisgarh on 15th September and **heavy rainfall** at isolated places on 16th September.

East Madhya Pradesh: Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places on 15th; **heavy to very heavy rainfall** at a few places with **Extremely very heavy rainfall** at isolated places over northeast Madhya Pradesh Chhattisgarh on 16th September and **heavy to very heavy rainfall** at isolated places on 17th September.

East Uttar Pradesh: Light to moderate rainfall at most places with **heavy rainfall** at isolated places on 16th & 17th September.

West Madhya Pradesh: Light to moderate rainfall at most places with **heavy rainfall** at isolated places on 17th & 18th September.

Mizoram & Tripura: Light to moderate rainfall at most places is very likely with isolated **heavy rainfall** during 14th -16th September.

Assam & Meghalaya: Light to moderate rainfall at many places is very likely with isolated **heavy rainfall** on 14th September.

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 15-09-2024:

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

Odisha - Baleshwar, Bhadrak, Deogarh, Jajapur, Kendujhar, Mayurbhanj and Sundargarh districts.

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

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Jharkhand - Bokaro, Dhanbad, East Singhbhum, Giridih, Hazaribagh, Jamtara, Khunti, Koderma, Ranchi, Saraikela and West Singhbhum 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.

(iii) 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 today, the 14th September. It is likely to become 40-50 kmph gusting to 60 kmph till evening of 15th September and decrease thereafter.

Squally wind speed reaching 45-55 kmph gusting to 50 kmph likely over Gangetic west Bengal (including Kolkata) and adjoining north Odisha & Jharkhand from night of 14th till morning of 15th September.

Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely over north Chhattisgarh and adjoining east Madhya Pradesh & southeast Uttar Pradesh from evening of 15th till evening of 16th September.

(iv) Sea Condition:

Rough to very rough sea condition is very likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts till today, the 14th September.

Rough sea condition is likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts from 15th till morning of 16th September.

(iv) Fishermen Warning:

Fishermen are advised not to venture into north Bay of Bengal and along & off Bangladesh, West Bengal, and Odisha coasts till morning of 16th September.

Impact Expected (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, Chhattisgarh, Madhya Pradesh and East Uttar Pradesh, Mizoram, and Tripura due to heavy rainfall)

- ✓ 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 and poor visibility due to heavy rain leading to increased travel time and incidents
- ✓ Likely disruption of marine and inland water transportation like small boats and trawlers.
- ✓ Minor damage to kutch 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 (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, Chhattisgarh, Madhya Pradesh and East Uttar Pradesh, Mizoram, and Tripura)

- ✓ Fishermen are advised not to venture into north Bay of Bengal from 14th to 16th September morning.
- ✓ Judicious regulation of surface transports including railways and roadways and onshore/offshore activities.
- ✓ 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

- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place.

Significant Rainfall (in cm) recorded during past 24 hours till 0830 hours IST of today 14.09.2024 is given in Annexure-I.

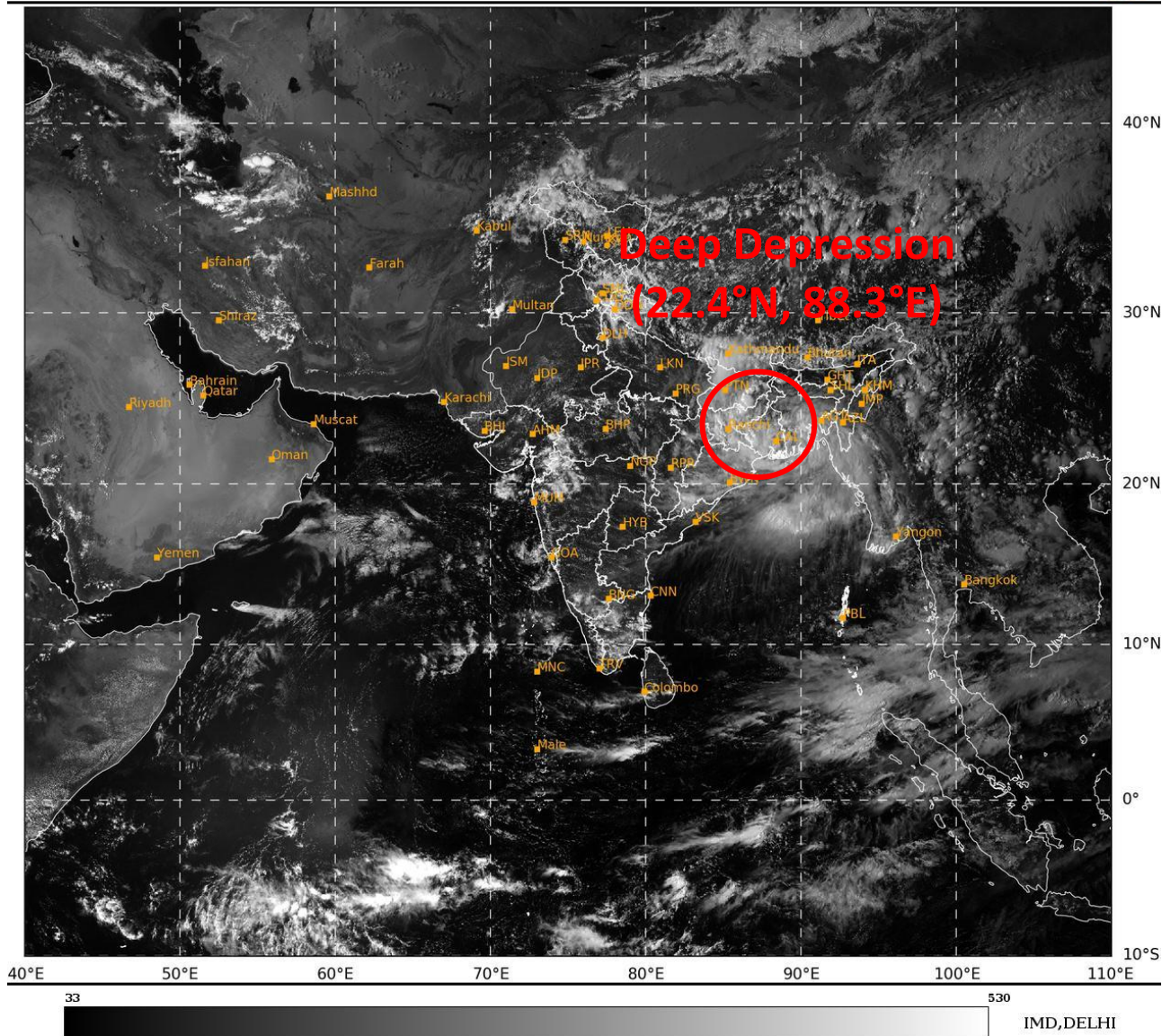
The next bulletin will be issued at 2030 hrs IST of today, the 14th September, 2024.

(Dr Ananda Kumar Das)
Scientist-F, RSMC, New Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

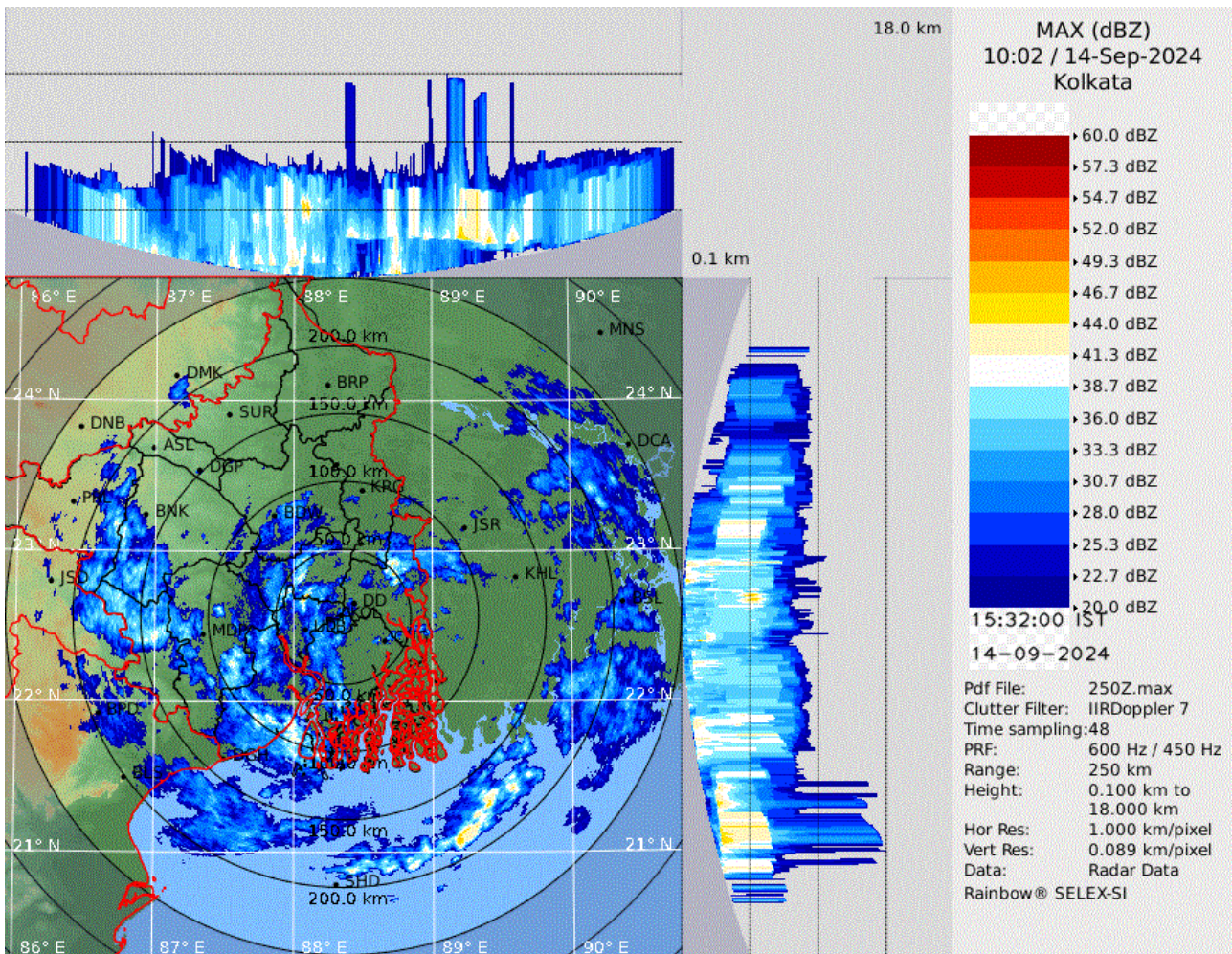
SAT : INSAT-3DR IMG
Visible Count 0.65 um
LIC Mercator

14-09-2024/(0915 to 0942) GMT
14-09-2024/(1445 to 1512) IST



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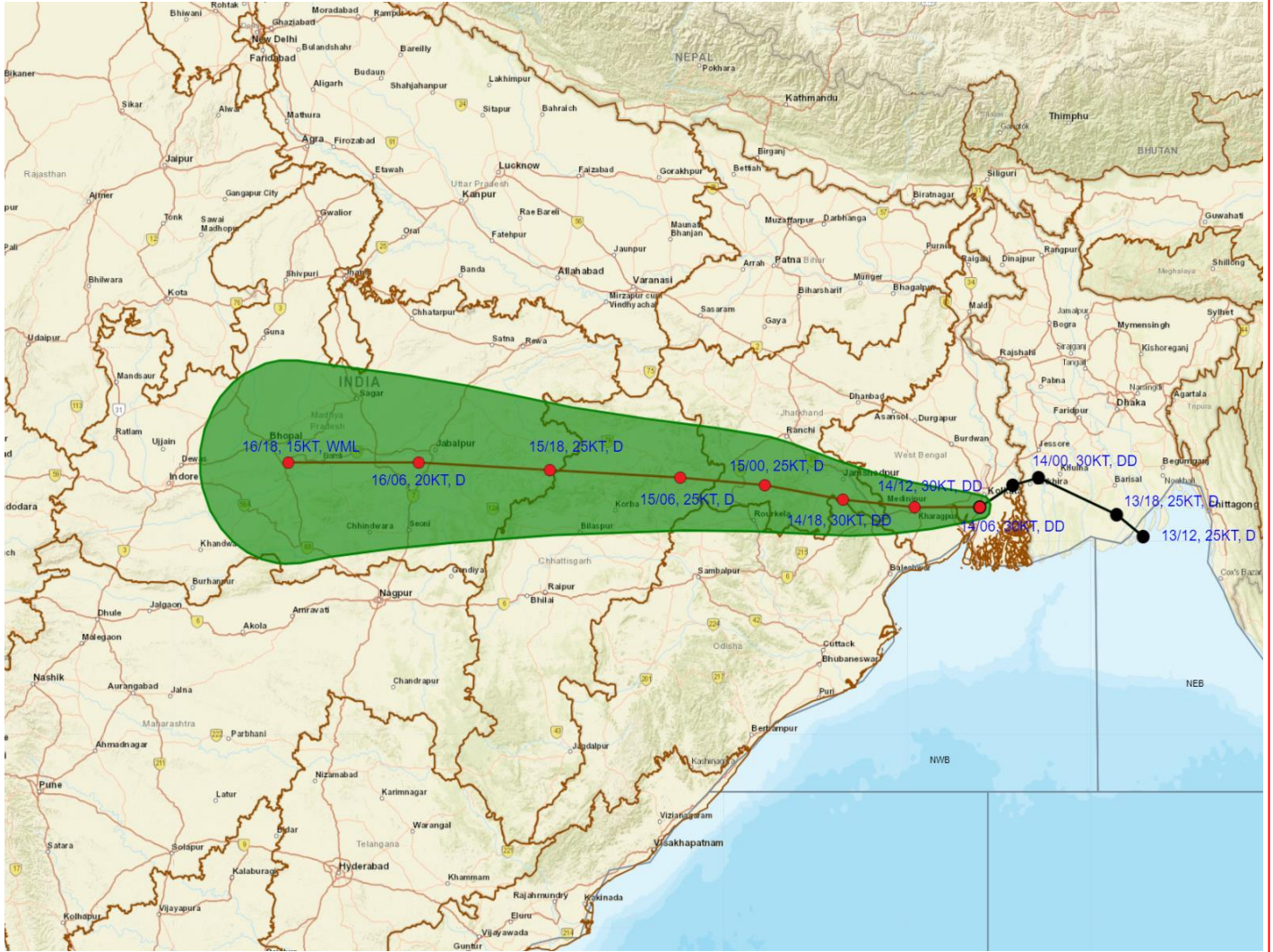
Kolkata Radar Image



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0600 UTC (1130 IST) OF 14TH SEPTEMBER, 2024.



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION GANGETIC WEST BENGAL BASED ON 0600 UTC (1130 IST) OF 14TH SEPTEMBER, 2024



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT
 ⚡ 34-47 KT
 ⚡ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 — CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

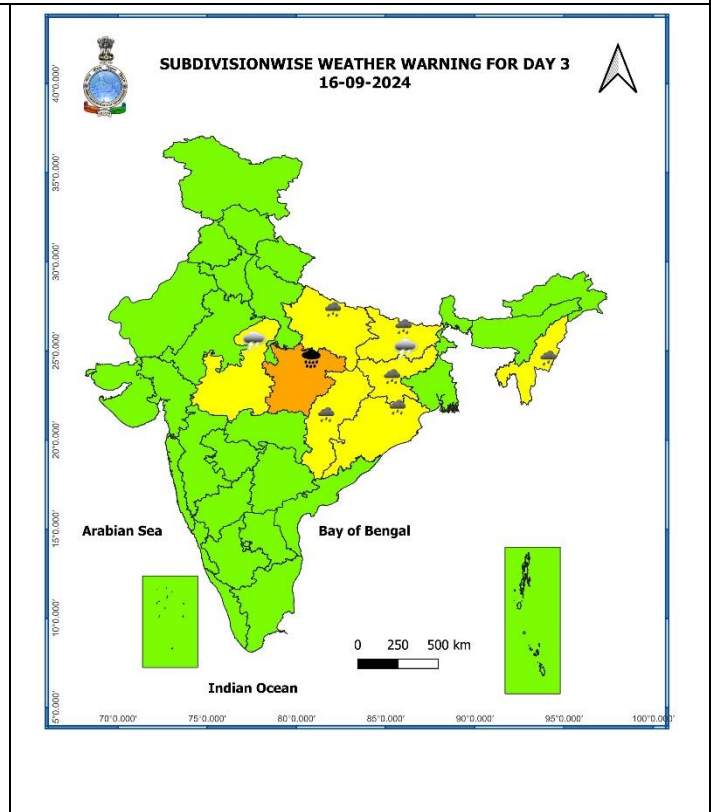
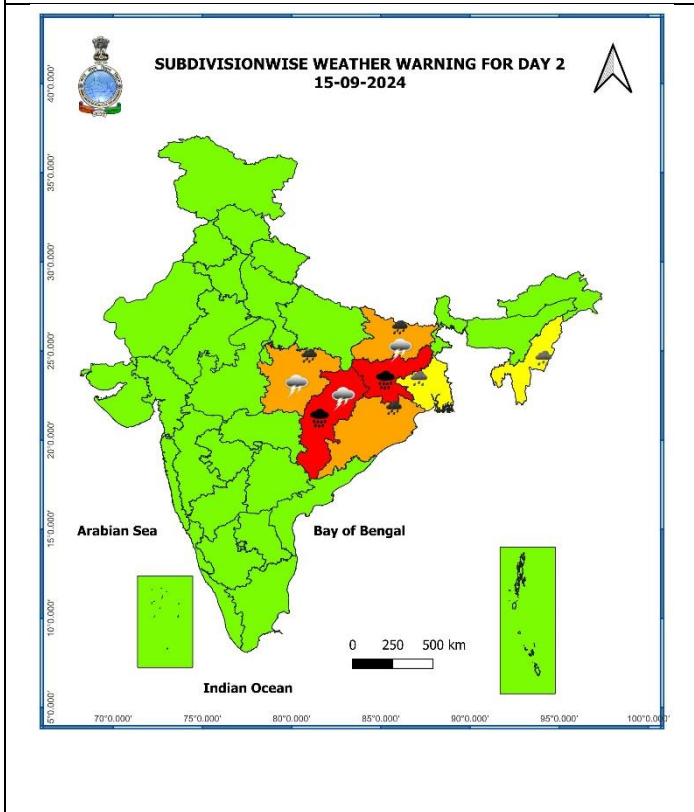
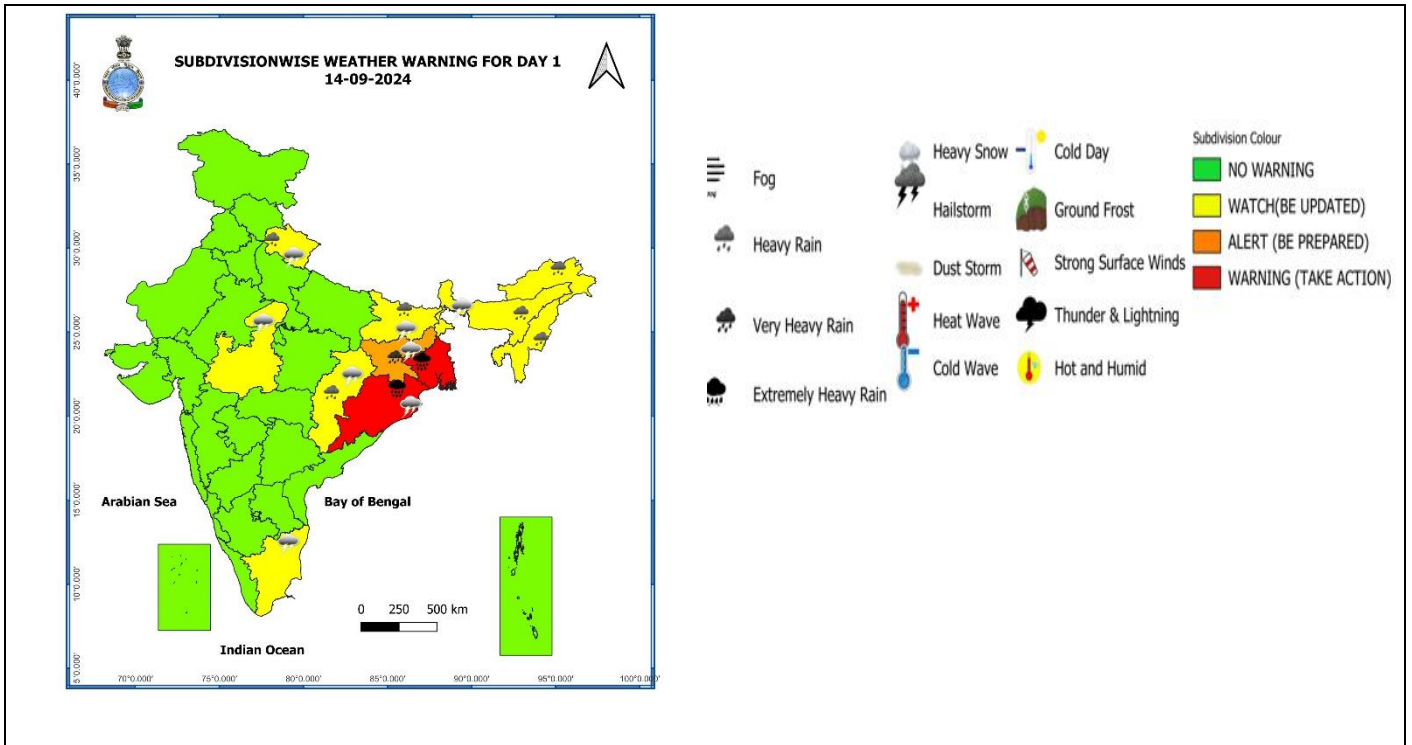
IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

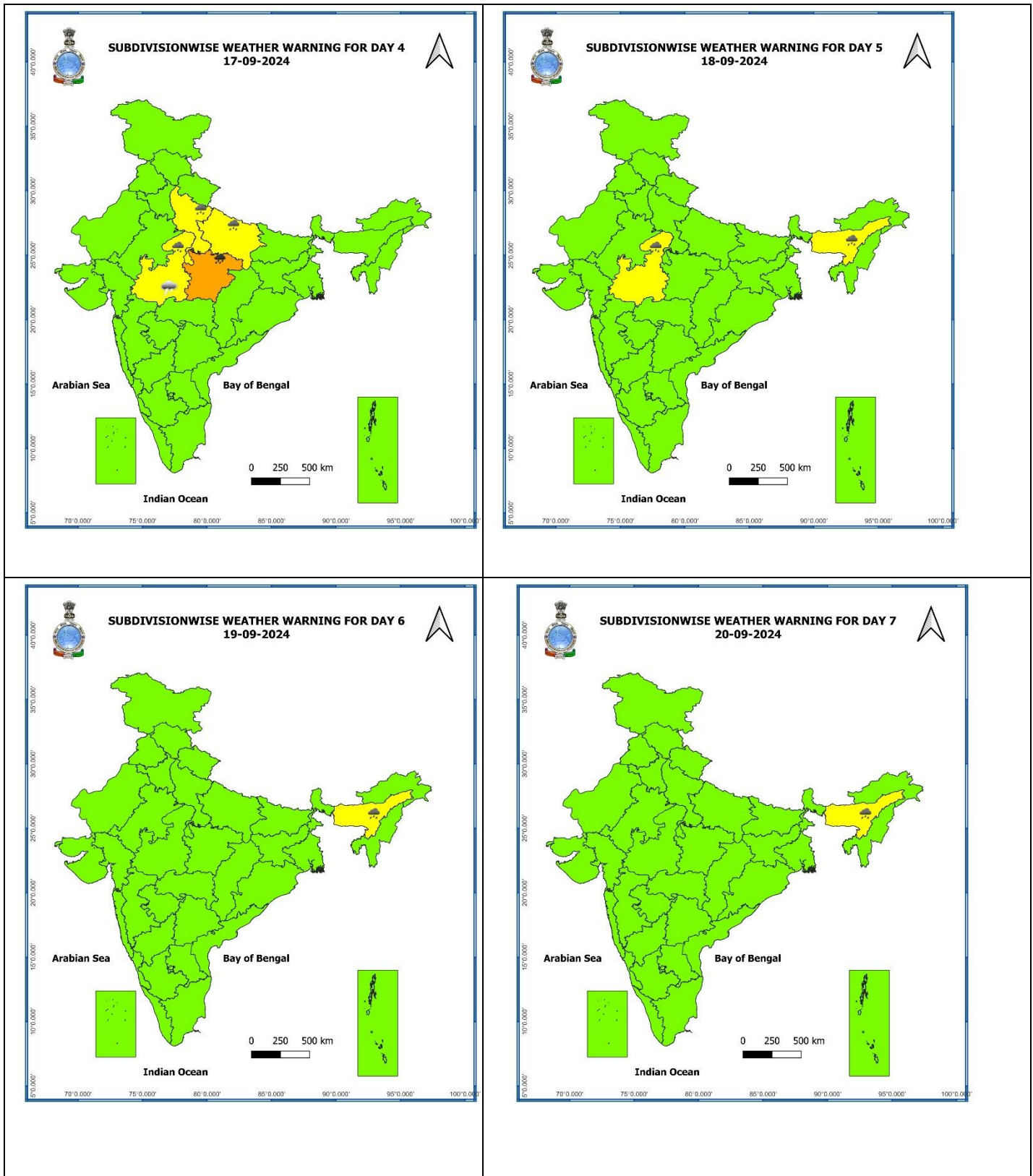
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Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warning Graphics



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



- 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

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Flash Flood Guidance

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 15-09-2024:

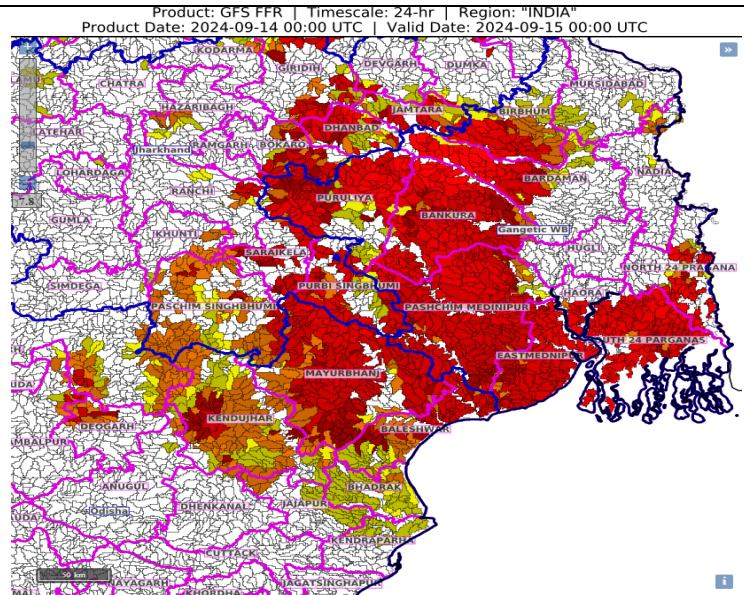
Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Odisha - Baleshwar, Bhadrak, Deogarh, Jajapur, Kendujhar, Mayurbhanj and Sundargarh districts.

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

Jharkhand - Bokaro, Dhanbad, East Singhbhum, Giridih, Hazaribagh, Jamtara, Khunti, Koderma, Ranchi, Saraikela and West Singhbhum districts.

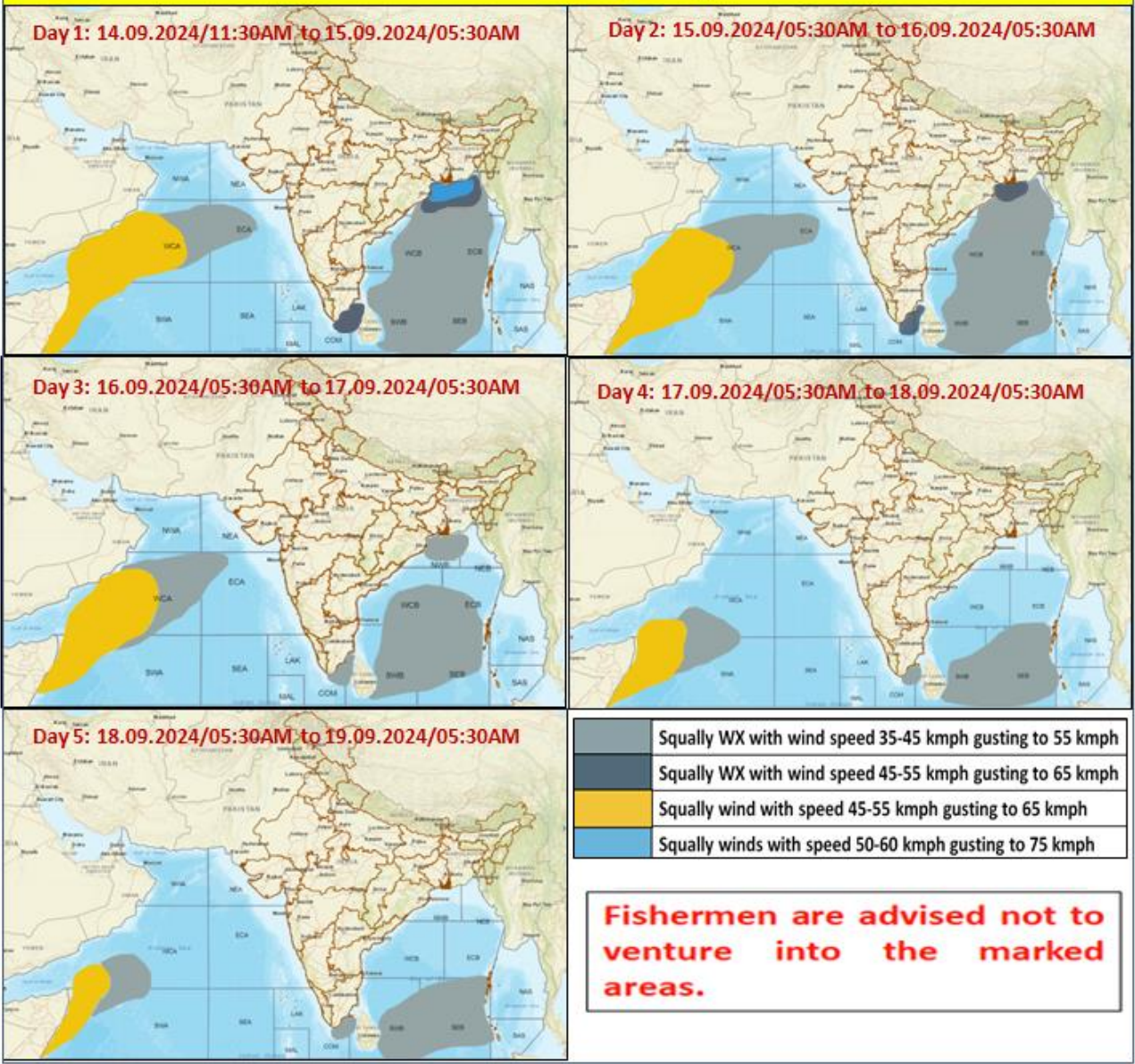
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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Fishermen Warning Graphics



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Annexure-I

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 14.09.2024 (in cm):

- ❖ **Gangetic West Bengal:** Contai (East Midnapore) 18, Durgachack (East Midnapore) 17, Digha (East Midnapore) 12, Bagati (Hooghly) 11, Sagar Island (South 24 Parganas) 11, Durgapur (Paschim Bardhaman) 10, Diamond Harbour (South 24 Parganas) 9, Panagarh (iaf) (Paschim Bardhaman) 9, Suri (pto) (Birbhum) 9, Jangipur (Murshidabad) 8, Dum Dum (North 24 Parganas) 8, Alipore (Kolkata) 8, Salar (Murshidabad) 8, Suri (cwc) (Birbhum) 8, Basirhat(pt) (North 24 Parganas) 7, Kalyani Smo (Nadia) 7, Berhampore (Murshidabad) 7, Hetampur (Birbhum) 7, Tilpara Barrage (Birbhum) 7, Mo Saltlake (North 24 Parganas) 7, Sri Niketan (Birbhum) 7, Gheropara (Birbhum) 7,
- ❖ **Odisha:** Kusumi (Mayurbhanj) 14, Bhograi (Balasore) 10, Jaleswar (Balasore) 7,
- ❖ **Bihar:** Beldaur (Khagaria) 9, Khaira (Jamui) 9, Lakhisarai (Lakhisarai) 8, Nabinagar (Aurangabad) 8, Halsi (Lakhisarai) 8, Jamui (Jamui) 8, Gogri (Khagaria) 7, Bausi (Banka) 7, Begusarai (Begusarai) 7;
- ❖ **Jharkhand:** Giridih Bengbad Kvk Aws (Giridih) 8, Bengabad (Giridih) 8, Sujani (Deoghar) 7, Pakuria (Pakur) 7;
- ❖ **Chhattisgarh:** Surajpur (Surajpur) 7;
- ❖ **Sub-Himalayan West Bengal:** Malda (Malda) 7;

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

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