



**India Meteorological Department**

**(Ministry of Earth Sciences)**

**NATIONAL BULLETIN NO.: 08 (BOB/04/2024)**

**TIME OF ISSUE: 1430 HOURS IST**

**DATED: 09.09.2024**

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**Sub: Deep Depression crossed Odisha coast near Puri between 1030-1130 hours IST of today, the 9<sup>th</sup> September**

The deep depression over northwest Bay of Bengal moved north-northwestwards with a speed of 13 kmph during past 6 hours, crossed Odisha coast close to Puri near 19.85N/86.0E between 1030-1130 hours IST and lay centered at 1130 hours IST of today, the 9th September, 2024 over coastal Odisha near latitude 20.0°N and longitude 86.0°E, about 30 km northeast of Puri (Odisha), 30 km south-southeast of Bhubaneswar (Odisha) and 270 km southeast of Sambalpur (Odisha).

It is very likely to move further northwestwards across interior Odisha maintaining its intensity of Deep Depression till evening and weaken gradually into a Depression by midnight of today, the 9<sup>th</sup> September. Thereafter, it is very likely to move west-northwestwards across North Chhattisgarh during subsequent 24 hours as a depression.

The system is under the continuous surveillance of Doppler Weather Radars at Gopalpur.

Forecast track and intensity are given in the following table:

<b>Date/Time (IST)</b>	<b>Position (Lat. °N/ Long. °E)</b>	<b>Maximum Sustained Surface Wind Speed (Kmph)</b>	<b>Category Of Cyclonic Disturbance</b>
09.09.24/1130	20.0/86.0	55-65 gusting to 75	Deep Depression
09.09.24/1730	20.6/85.4	50-60 gusting to 70	Deep Depression
09.09.24/2330	21.2/84.6	45-55 gusting to 65	Depression
10.09.24/0530	21.6/83.7	40-50 gusting to 60	Depression
10.09.24/1130	21.9/82.6	35-45 gusting to 55	Depression

**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.**

## Warnings:

### (i) Rainfall warning

**Odisha:** Light to moderate rainfall at most places is very likely with heavy to very heavy rainfall at a few places with extremely heavy rainfall at isolated places over south Odisha and isolated heavy to very heavy rainfall over north Odisha on 9<sup>th</sup>; heavy to very heavy rainfall at isolated places over Odisha on 10<sup>th</sup> and isolated heavy rainfall over interior Odisha on 11<sup>th</sup> September.

**Chhattisgarh:** Light to moderate rainfall at most places is likely with heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places on 9<sup>th</sup> and heavy rainfall at isolated places on 10<sup>th</sup> September.

**Vidarbha:** Light to moderate rainfall at most places is very likely with heavy to very heavy rainfall at a few places and extremely heavy at isolated places on 9<sup>th</sup> and heavy to very heavy rainfall at isolated places on 10<sup>th</sup> and heavy rainfall at isolated places on 11<sup>th</sup> September.

**Coastal Andhra Pradesh & Yanam:** Light to moderate rainfall at most places is very likely with heavy to very heavy rainfall at a few places on 9<sup>th</sup> and heavy rainfall on 10<sup>th</sup> September.

**Telangana:** Light to moderate rainfall at many places is likely with heavy to very heavy rainfall at isolated places very likely on 9<sup>th</sup> September.

**Jharkhand:** Light to moderate rainfall at most places is very likely with heavy rainfall at isolated places over South Jharkhand during 9<sup>th</sup> to 10<sup>th</sup> September.

### (ii) Wind warning

Squally weather with wind speed reaching 55-65 kmph gusting to 75 kmph is prevailing over Northwest and adjoining westcentral Bay of Bengal and along & off Andhra Pradesh-Odisha-West Bengal coasts and is likely to continue next 3 hours. It is likely to decrease, gradually becoming 45-55 kmph gusting to 65 kmph by evening of 9<sup>th</sup> September. It will decrease gradually thereafter.

Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph is likely over interior districts of north Odisha and adjoining districts of Jharkhand and north Chhattisgarh from noon to midnight of 09<sup>th</sup> September. It will decrease gradually thereafter.

**(iii) Sea Condition:** Rough to very rough sea condition over Northwest and adjoining westcentral Bay of Bengal and along & off Andhra Pradesh-Odisha-West Bengal coasts till evening of 9<sup>th</sup> and rough sea condition on 10<sup>th</sup> September. It is likely to improve gradually thereafter.

### (iv) Fishermen Warning

Fishermen are advised not to venture into Northwest and adjoining westcentral Bay of Bengal; along & off Andhra Pradesh-Odisha-West Bengal coasts till 10<sup>th</sup> September.

### (v) Flash Flood Guidance: (Graphics Attached)

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

**Odisha** - Anugul, Balangir, Baleshwar, Baragarh, Bauda, Bhadrak, Cuttack, Deogarh, Dhenkanal, Jagatsinghapur, Jajpur, Jharsuguda, Kalahandi, Kendrapara, Kandhamal, Khordha, Koraput, Mayurbhanj, Nabarangapur, Nuaparha, Puri, Sambalpur, Subarnapur and Sundargarh districts.

**Chhattisgarh** – Bijapur, Balod, Bemetara, Bijapur, Dantewara, Dhamtari, Gariaband, Kanker, Korba, Mahasamund, Raipur, Rajnandgaon and Surguja 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.

### (vi) Impact Expected (coastal Andhra Pradesh, Odisha, Chhattisgarh, Telangana and Jharkhand due to heavy rainfall and squally wind)

- ✓ 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.

**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.**

- ✓ Reduction of visibility over sea and adjoining coastal areas 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)
- ✓ Uprooting of small trees and breaking of tree branches e.g. Banana, Papaya, Moringa, Orchards and etc. along coastal districts of North Odisha & adjoining West Bengal.

**(vii) Action Suggested (coastal Andhra Pradesh, Odisha, Chhattisgarh, Telangana and Jharkhand due to heavy rainfall)**

- ✓ Fishermen are advised not to venture into Northwest and adjoining Northeast & Central Bay of Bengal; along & off Andhra Pradesh-Odisha-West Bengal coasts till 10<sup>th</sup> September.
- ✓ 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**

- ✓ Drain out excess water from rice, soybean, red gram, maize, cotton and turmeric in **Telangana**; from rice, finger millet, maize and groundnut in **Odisha** to prevent water logging.
- ✓ Postpone transplanting of rice in North Coastal **Andhra Pradesh**.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place.

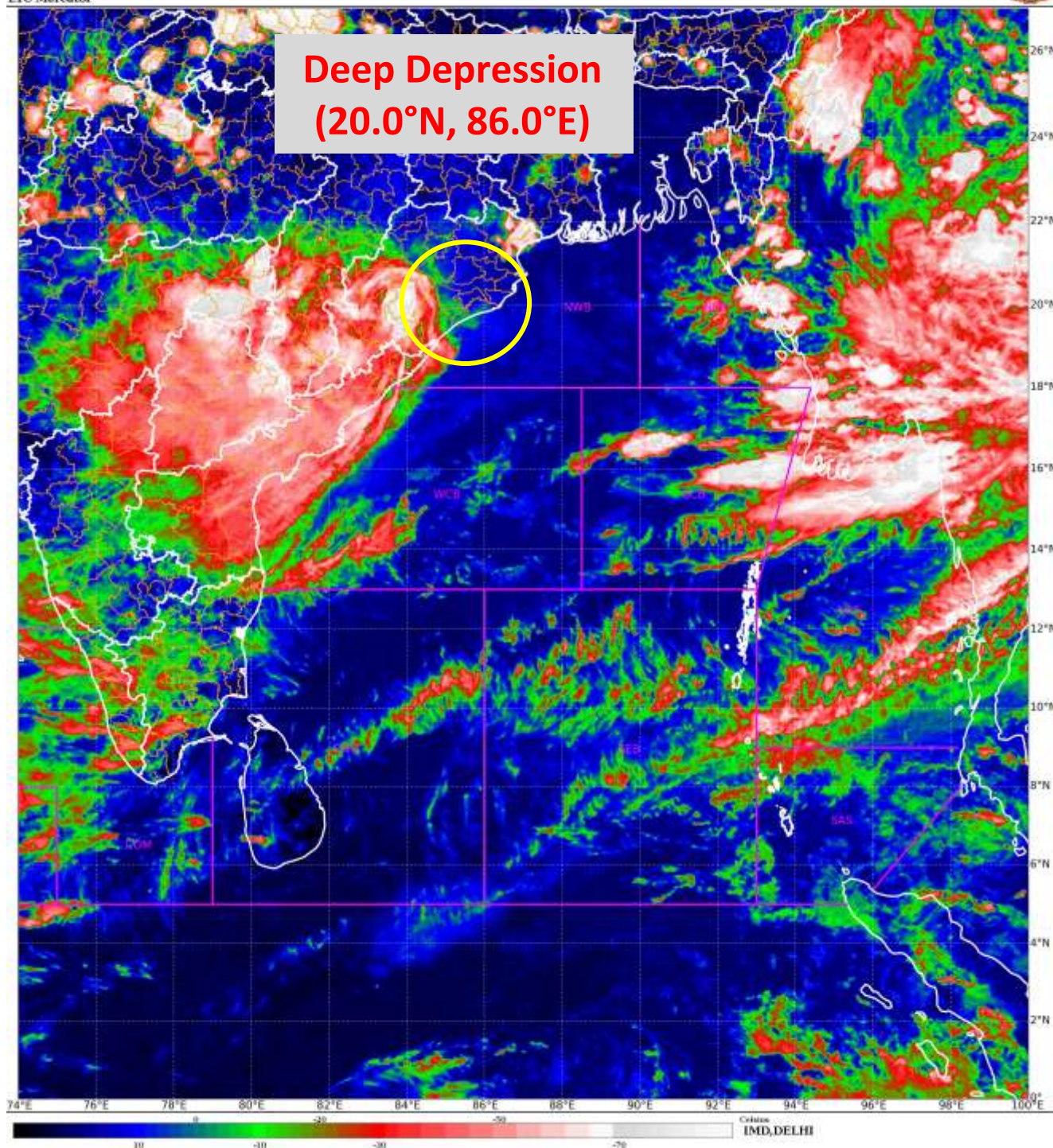
**Significant rainfall recorded from 0830 hrs IST of yesterday to 0830 hrs IST of today, the 9th September, 2024 (cm) is given in ANNEXURE-I.**

***The next bulletin will be issued at 1430hrs IST of today, the 9<sup>th</sup> September, 2024.***

**(M Sharma)**  
**Scientist- D, RSMC, New Delhi**

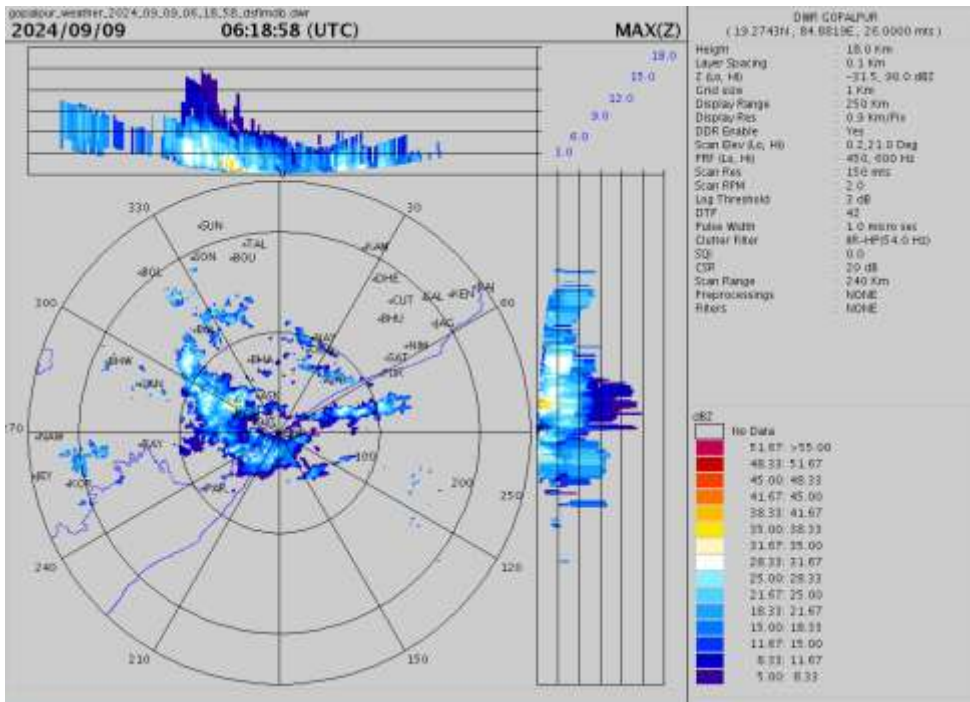
*Copy to: CRS, Pune/ACWC Kolkata/ACWC Chennai/CWC Bhubaneswar/CWC  
Visakhapatnam/MO Port Blair/MC Raipur/MC Ranchi/MC Hyderabad/MC Amaravati*

**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.**



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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.**

## Maximum reflectivity imagery from Doppler Weather Radar, Gopalpur



**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 NORTHWEST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 9th 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 ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 9th 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)

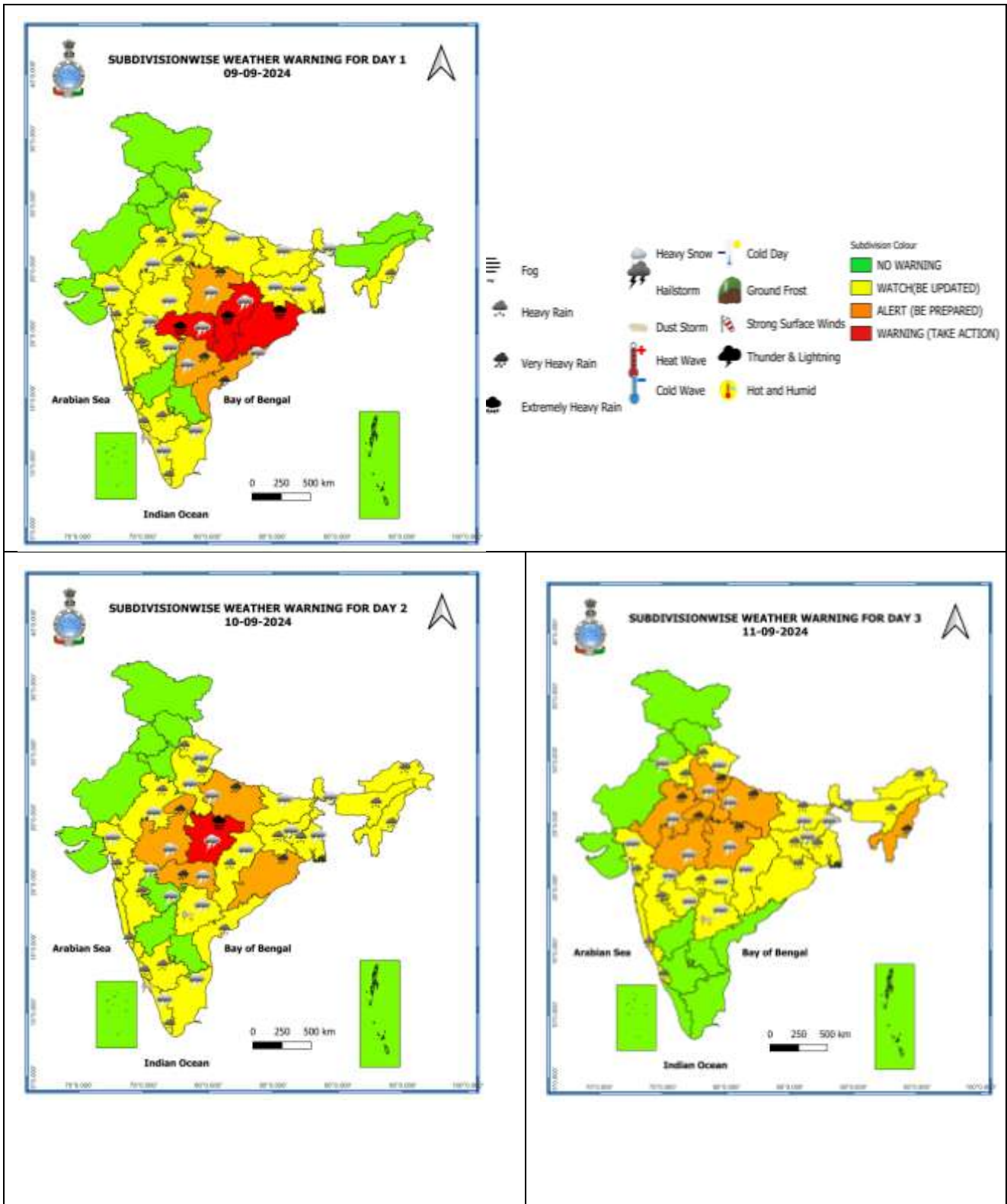
**IMPACT OVER THE SEA**

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

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

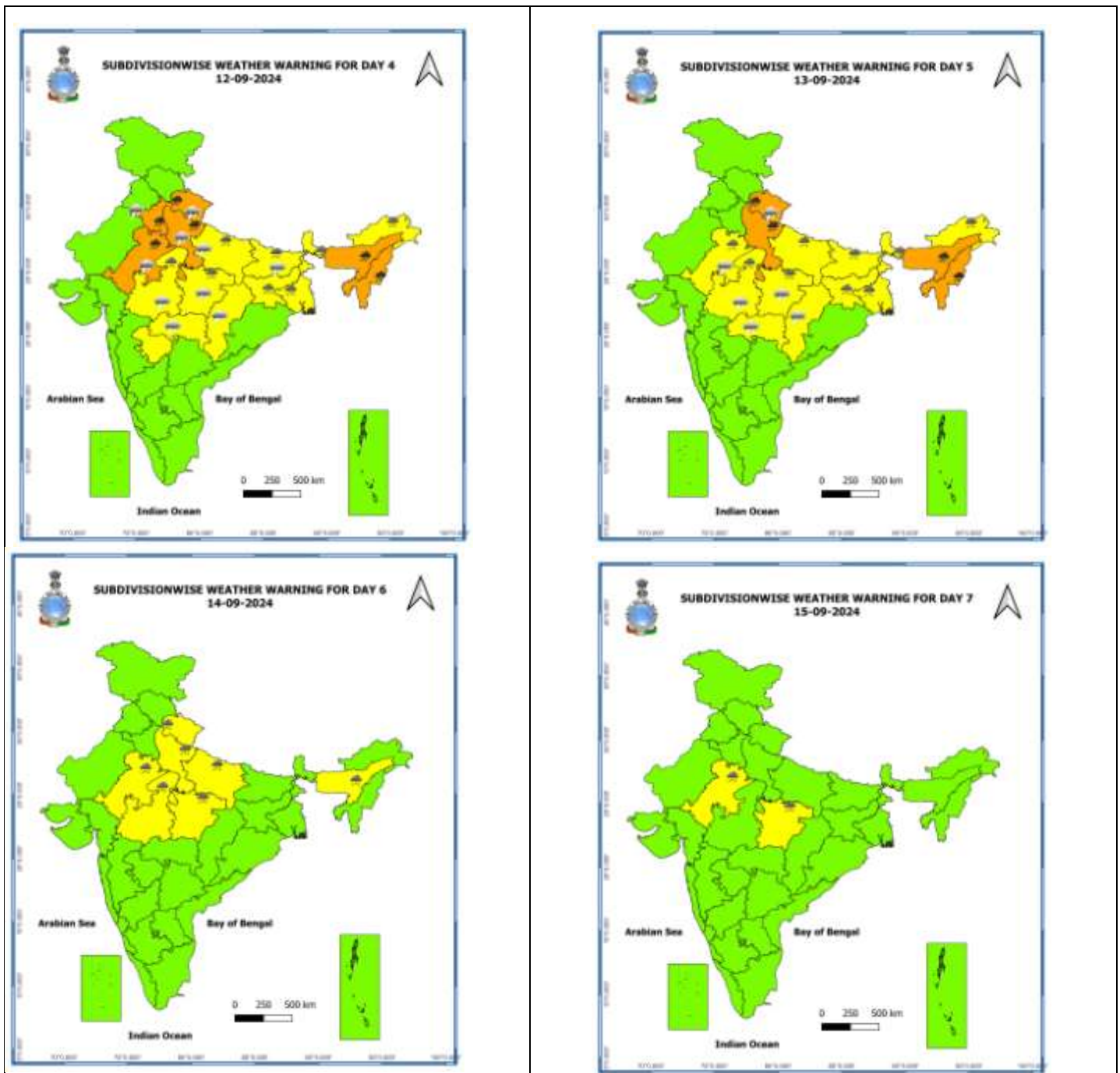
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

## 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.

**24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 10-09-2024 :**

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

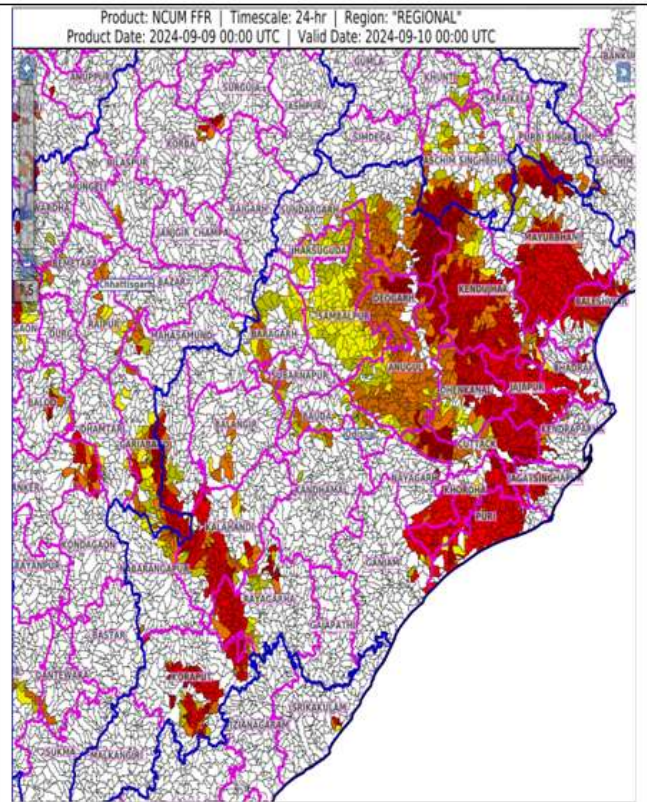
**Chhattisgarh** - Balod, Bemetara, Bijapur, Dantewara, Dhamtari, Gariaband, Kanker, Korba, Mahasamund, Raipur, Rajnandgaon and Surguja districts.

**Jharkhand** - East Singhbhum, Khunti, Simdega and West Singhbhum districts.

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

**Odisha** - Anugul, Balangir, Baleshwar, Baragarh, Bauda, Bhadrak, Cuttack, Deogarh, Dhenkanal, Jagatsinghapur, Jajapur, Jharsuguda, Kalahandi, Kendraparha, Kendujhar, Khordha, Koraput, Mayurbhanj, Nabarangapur, Nuaparha, Puri, Rayagarha, Sambalpur, Subarnapur and Sundargarh district.

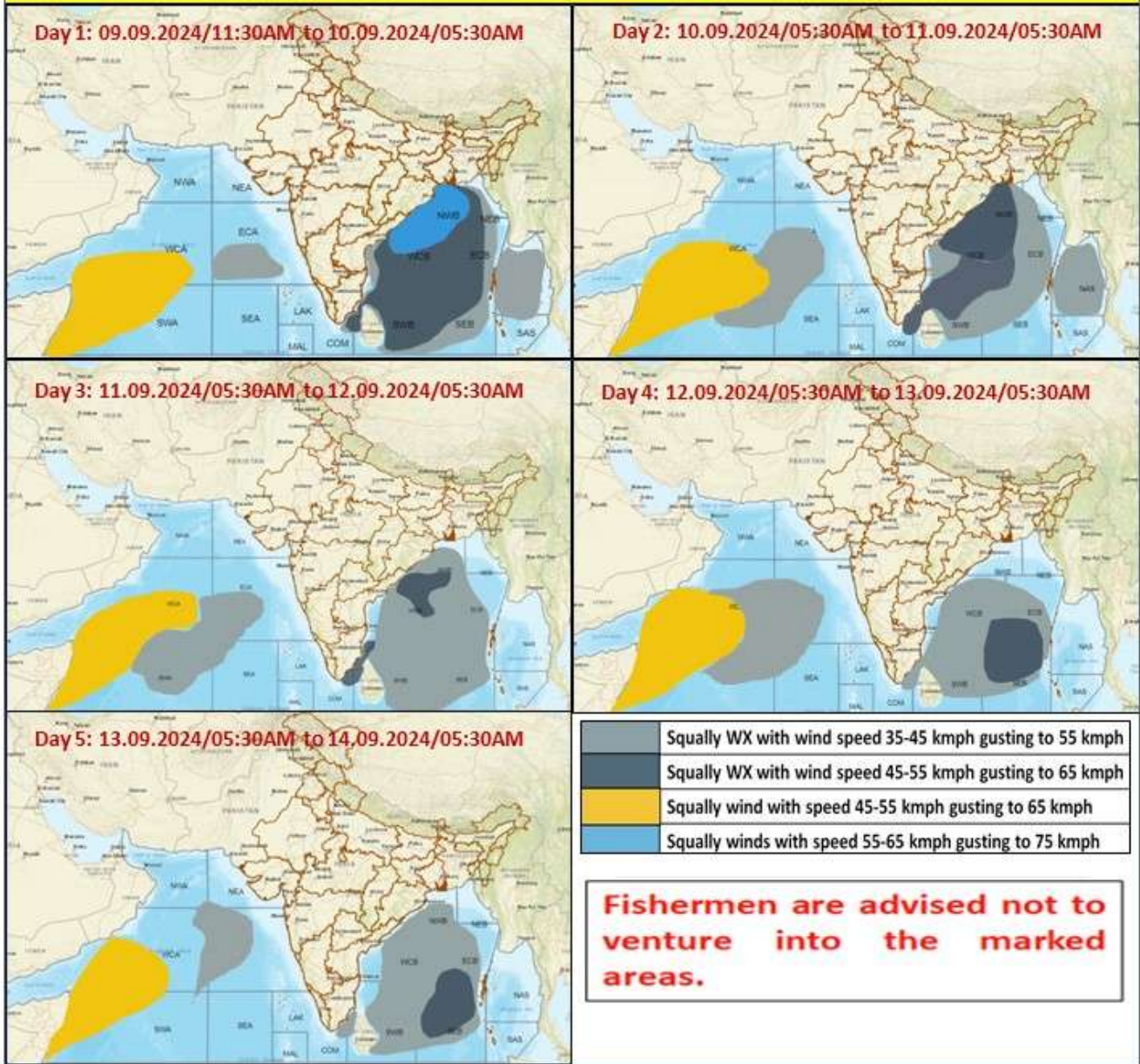
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



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

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

## Fishermen 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.**

**Significant rainfall recorded from 0830 hrs IST of yesterday to 0830 hrs IST of today, the 9<sup>th</sup> September, 2024 (cm):**

**Odisha:** Malkangiri (Malkangiri) 25, Chitrakunda K Guma (Malkangiri) 23, Korukunda (Malkangiri) 20, Mathili (Malkangiri) 15, Lamataput (Koraput) 13, Ambadola (Rayagada) 12, Padia (Malkangiri) 10, Chhatrapur (Ganjam) 10, Digapahandi (Ganjam) 9, Gopalpur (Ganjam) 9, Jeypore (Koraput) 9, Similiguda (Koraput) 9, Madanpur Rampur (Kalahandi) 8, Ranpur (Nayagarh) 8, Kotpad (Koraput) 8, Chikiti (Ganjam) 8, Nandapur (Koraput) 8, Lanjigarh (Kalahandi) 8, Ullunda (Sonepur) 7, Nandahandi (Nawarangpur) 7, Ganjam (Ganjam) 7, Berhampur (Ganjam) 7, Rangeilunda (Ganjam) 7, Chandahandi (Nawarangpur) 7, Koksara (Kalahandi) 7, Koraput (Koraput) 7, Th Rampur (Kalahandi) 7, Udala (Mayurbhanj) 7, Nawana (Mayurbhanj) 7,

**Chhattisgarh:** Bhairamgarh (Bijapur) 21, Bijapur (Bijapur) 21, Kutaru (Bijapur) 21, Chhotedongar (Narayanpur) 20, Orcha (Narayanpur) 20, Kohkameta (Narayanpur) 20, Narayanpur (Narayanpur) 19, Tongpaal (Sukma) 18, Sukma (Sukma) 17, Gangalur (Bijapur) 16, Gadiras (Sukma) 14, Gidam (Dantewada) 14, Bastanar (Bastar) 14, Antagarh (Kanker) 14, Bade Bacheli (Dantewada) 13, Dantewara (Dantewada) 11, Dornapal (Sukma) 11, Kuakonda (Dantewada) 11, Pakhanjur (Kanker) 11, Jagargunda (Sukma) 11, Bhopalpatnam (Bijapur) 10, Dhanora (Kondagaon) 10, Nangur (Bastar) 10, Bhanupratappur (Kanker) 10, Konta (Sukma) 10, Kanker (Kanker) 10, Pharasgaon (Kondagaon) 10, Keshkal (Kondagaon) 9, Usoor (Bijapur) 9, Lohandiguda (Bastar) 9, Charama (Kanker) 8, Barsur (Dantewada) 7, Baderajpur (Kondagaon) 7, Belargaon (Dhamtari) 7,

**Vidarbha:** Bhamragad (Gadchiroli) 16, Etapalli (Gadchiroli) 7, Ahiri (Gadchiroli) 7,

**Coastal Andhra Pradesh & Yanam:** Chintapalle (Alluri Sitharamaraju) 13, Ranastalam (Srikakulam) 11, Pusapatirega (Vizianagaram) 10, Bondapalle (Vizianagaram) 10, Bheemunipatnam (Vishakhapatnam) 10, Merakamudidam (Vizianagaram) 9, Cheepurupalle (Vizianagaram) 9, Visakhapatnam Ap (Vishakhapatnam) 9, Garividi (Vizianagaram) 9, Denkada (Vizianagaram) 8, Visakhapatnam (Vishakhapatnam) 8, Narsipatnam (Anakapalli) 8, Gajapathinagaram (Vizianagaram) 8, Srungavarapukota (Vizianagaram) 8, Vepada (Vizianagaram) 7, Vizianagaram (Vizianagaram) 7, Yelamanchili (Anakapalli) 7, Chodavaram (Anakapalli) 7, Tuni (Kakinada) 7, Therlam (Vizianagaram) 7, Araku Valley (Alluri Sitharamaraju) 7,

**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.**