



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

**NATIONALBULLETIN NO.: 14 (BOB/05/2024)**

**TIME OF ISSUE: 1320 HOURS IST**

**DATED: 16.09.2024**

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**Sub: Deep Depression over Gangetic West Bengal and adjoining Jharkhand**

The deep depression over Gangetic West Bengal moved slowly west-northwestwards with a speed of 8 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 16<sup>th</sup> September 2024, over the Gangetic West Bengal and adjoining Jharkhand near latitude 23.1° N and longitude 86.7° E, about 40 km southeast of Purulia (West Bengal), 50 km southwest of Bankura (West Bengal), 60 km east-northeast of Jamshedpur (Jharkhand) and 140 km east of Ranchi (Jharkhand).

It is likely to move west-northwestwards across Gangetic West Bengal & Jharkhand and weaken into a depression during next 12 hours. Thereafter, it will continue to move west-northwestwards across Jharkhand and North Chhattisgarh during subsequent 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.**

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
16.09.24/0830	23.1/86.7	50-60 gusting to 70	Deep Depression
16.09.24/1730	23.3/85.9	50-60 gusting to 70	Deep Depression
17.09.24/0530	23.7/84.3	45-55 gusting to 65	Depression
17.09.24/1730	24.2/82.7	35-45 gusting to 55	Depression

### Warnings:

#### (i) Rainfall warning

**Jharkhand:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places & **isolated extremely heavy rainfall** over south Jharkhand & **isolated heavy to very heavy rainfall** over North Jharkhand on 16<sup>th</sup> September. Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places over Jharkhand on 17<sup>th</sup> September.

**Gangetic West Bengal:** Light to moderate rainfall at most places is very likely with **heavy rainfall** at isolated places over Gangetic West Bengal on 16<sup>th</sup> September.

**Odisha:** Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at isolated places over North Odisha on 16<sup>th</sup> September and **heavy rainfall** at isolated places over Northwest Odisha on 17<sup>th</sup> September.

**Bihar:** Light to moderate rainfall at most places with **heavy rainfall** at isolated places is very likely over South Bihar on 16<sup>th</sup> and 17<sup>th</sup> September.

**Chhattisgarh:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places over North Chhattisgarh during 16<sup>th</sup> to 17<sup>th</sup> September.

**Madhya Pradesh:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places is likely over Northeast Madhya Pradesh on 16<sup>th</sup> & 17<sup>th</sup> September and **heavy rainfall** at isolated places on 18<sup>th</sup> September. Light to moderate rainfall at most places with **heavy rainfall** at isolated places over Northwest Madhya Pradesh during 17<sup>th</sup> to 18<sup>th</sup> September.

**Uttar Pradesh:** Light to moderate rainfall at many places with **heavy to very rainfall** at isolated places over Southeast Uttar Pradesh during 16<sup>th</sup> and 17<sup>th</sup> September. Light to moderate rainfall at many places with **heavy to very rainfall** at isolated places over West Uttar Pradesh on 17<sup>th</sup> and **heavy rainfall** at isolated places on 18<sup>th</sup> September.

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

##### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 17-09-2024:

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

**Odisha** - Keonujhar, Mayurbhanj, Deogarh, Baragarh, Jharsuguda, Subarnpur, Sambalpur and Sundargarh districts.

**Chhattisgarh** - Balarampur, Jashpur, Korea, Surajpur and Surguja districts.

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

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern 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 prevail along & off West Bengal & north Odisha coasts and adjoining north Bay of Bengal during next 6 hours. Thereafter, it is likely to become 40-50 kmph gusting to 60 kmph till evening of 16<sup>th</sup> September and decrease further.

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over Gangetic West

**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.**

Bengal and adjoining Jharkhand & north Odisha till evening of 16<sup>th</sup> September. Thereafter, it is likely to decrease gradually becoming 40-50 kmph gusting to 60 kmph over Jharkhand and adjoining Southeast Uttar Pradesh & North Chhattisgarh till 17<sup>th</sup> September evening and decrease thereafter.

**(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 during next 6 hours.

Subsequently, Rough Sea condition is likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts from afternoon of 16<sup>th</sup> September and improve thereafter.

**(iv) Fishermen Warning:**

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

**Impact Expected (Jharkhand, North Chhattisgarh, North Odisha, Gangetic West Bengal, South Bihar and Northeast Madhya Pradesh due to heavy rainfall and strong winds)**

- ✓ 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 inland water transportation like small boats and trawlers.
- ✓ Minor damage to kutchha 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 (Jharkhand, North Chhattisgarh, North Odisha, Gangetic West Bengal, South Bihar and Northeast Madhya Pradesh due to heavy rainfall and strong winds)**

- ✓ Fishermen are advised not to venture into north Bay of Bengal till 16<sup>th</sup> September.
- ✓ Judicious regulation of surface transports including railways.
- ✓ 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 places.

**Significant amount of rainfall (in cm; from 0830 hours IST to 0830 hours IST of today, the 16<sup>th</sup> September, 2024).**

**Odisha:** Balasore-10.

**Jharkhand:** Jamshedpur-9, Daltonganj-6, Ranchi-3;

**Gangetic West Bengal:** Bankura-8, Kolkata (Alipore)-3, Digha-5, Malda-2;

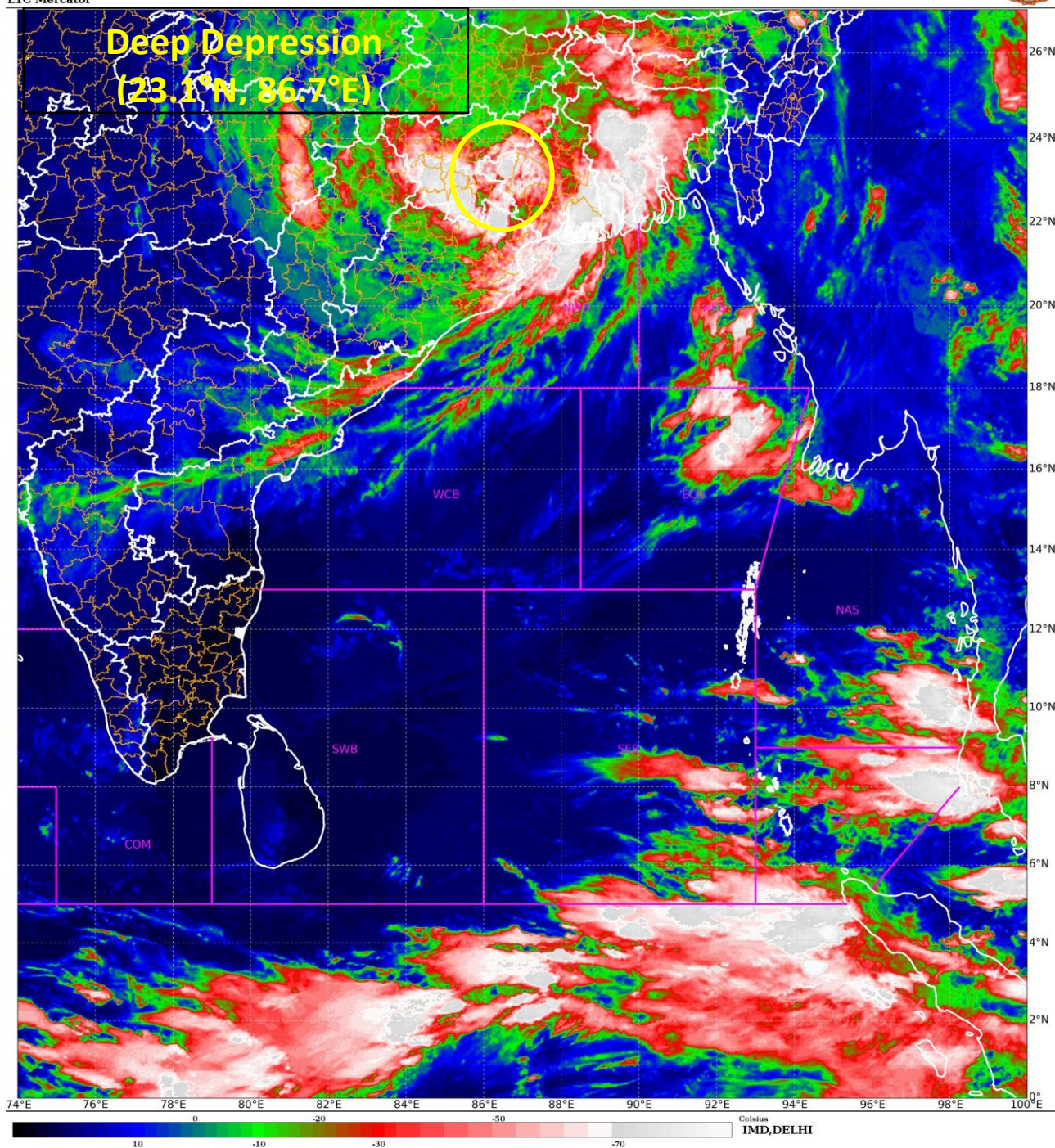
**Chhattisgarh:** Ambikapur-5;

**The next bulletin will be issued at 1430 hrs IST of today, the 16<sup>th</sup> September, 2024.**

**(Dr. Suprit Kumar)**  
**Scientist-E, RSMC, New Delhi**

*Copy to: CRS, Pune/RMC Chennai /RMC Kolkata/RMC Guwahati/MC Bhubaneswar/MC Ranchi/MC Patna/MC Raipur/ MC Agartala/ MC Shillong/MC Aizawl/Mc, Bhopal/MC Lucknow*

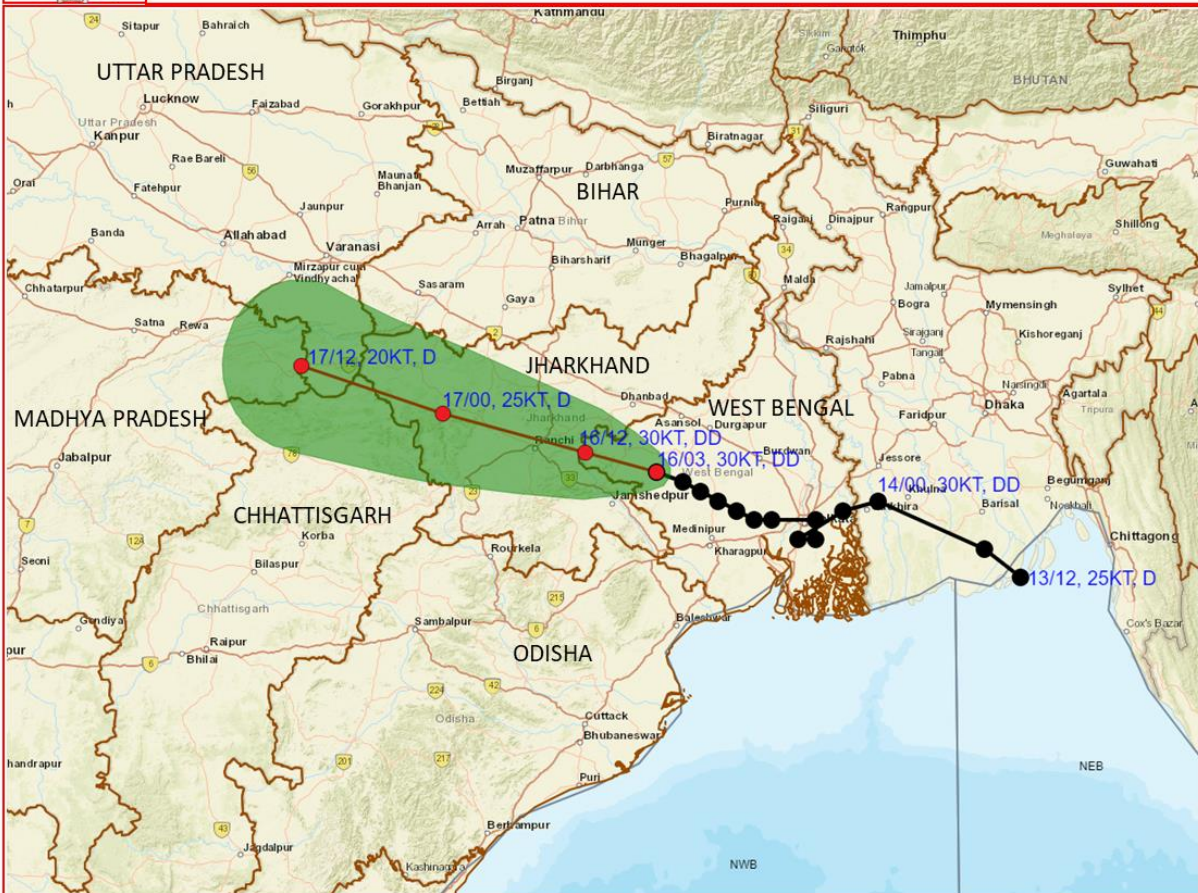
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**OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND BASED ON 0300 UTC (0830 IST) OF 16<sup>TH</sup> SEPTEMBER, 2024.**



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 OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND BASED ON 0300 UTC (0830 IST) OF 16<sup>TH</sup> SEPTEMBER, 2024.**



DATE/TIME IN UTC  
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L: LOW PRESSURE AREA  
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VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

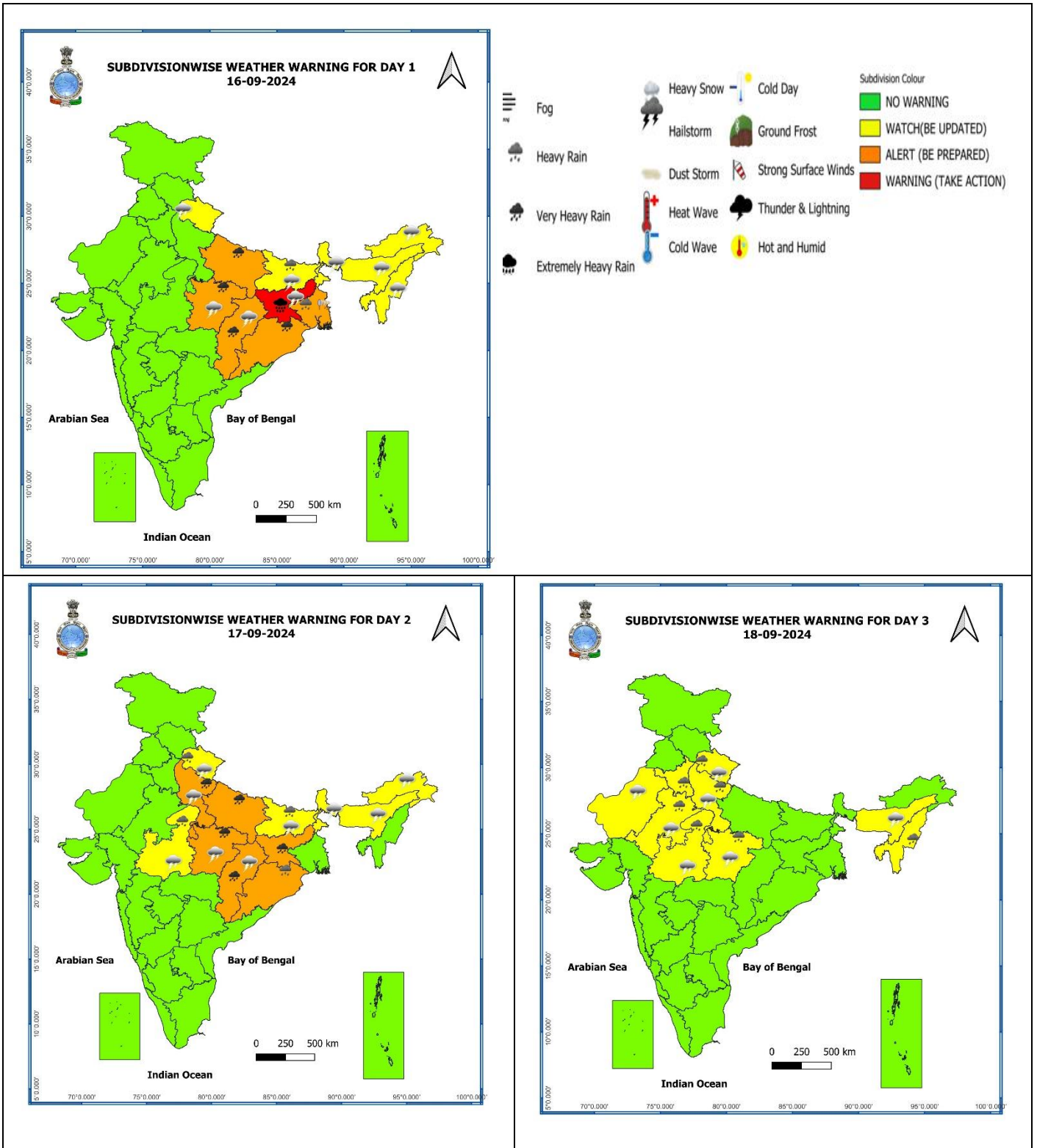
● LESS THAN 34 KT  
○ 34-47 KT  
⊙ ≥ 48 KT  
— OBSERVED TRACK  
— FORECAST TRACK  
— CONE OF UNCERTAINTY  
AREA OF MAXIMUM SUSTAINED WIND SPEED:  
■ 28-33 KT (52-61 KMPH)  
■ 34-49 KT (62-91 KMPH)  
■ 50-63 KT (92-117 KMPH)  
■ ≥ 64 KT (≥118 KMPH)

**IMPACT OVER THE SEA**

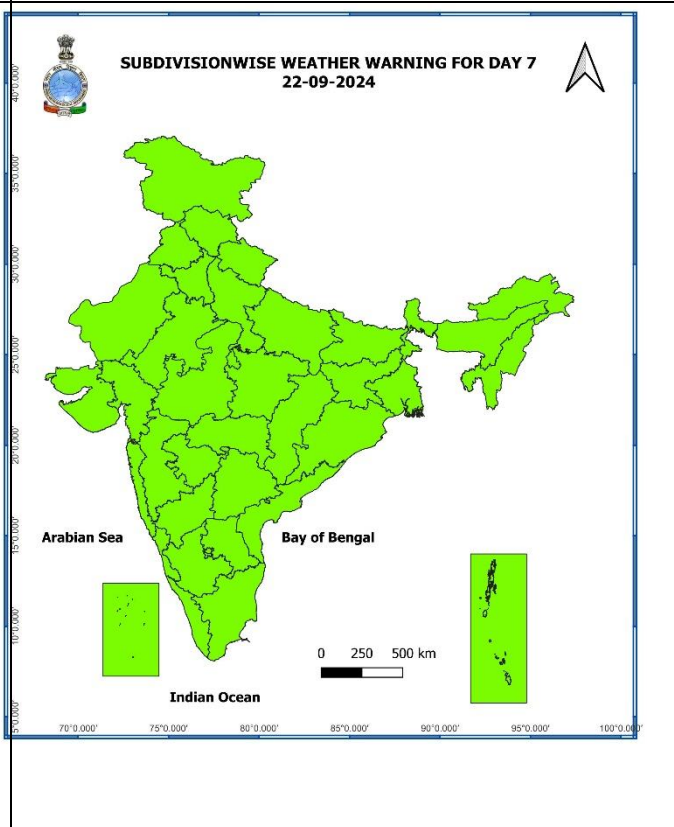
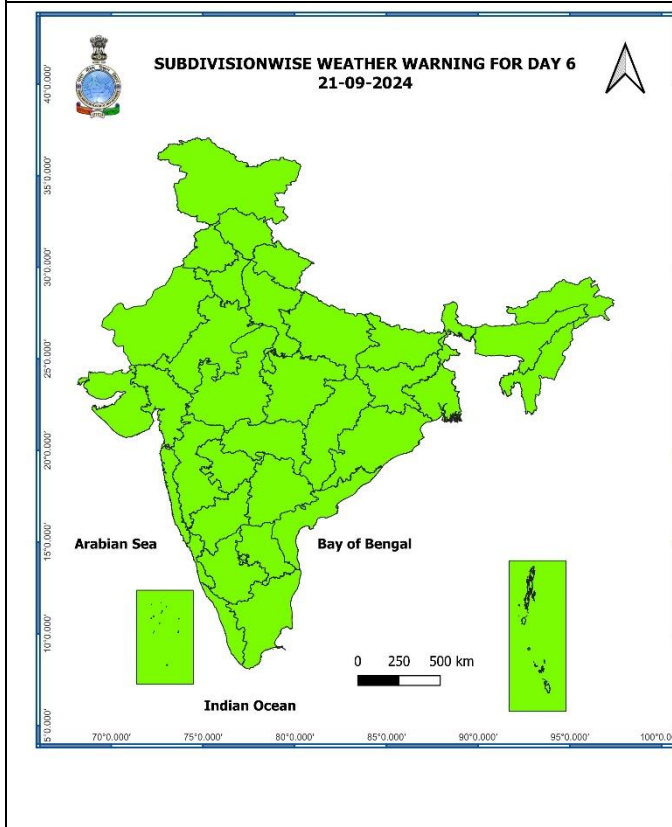
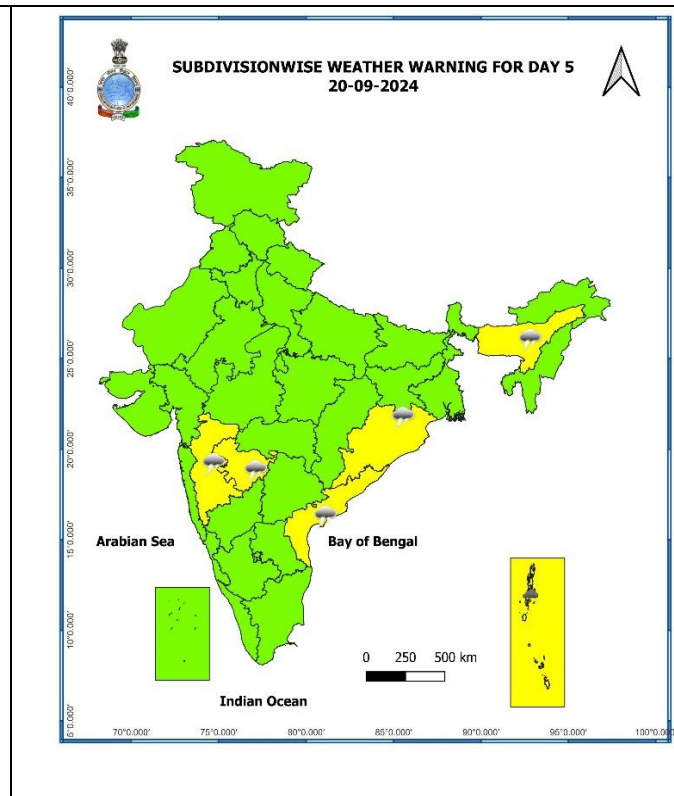
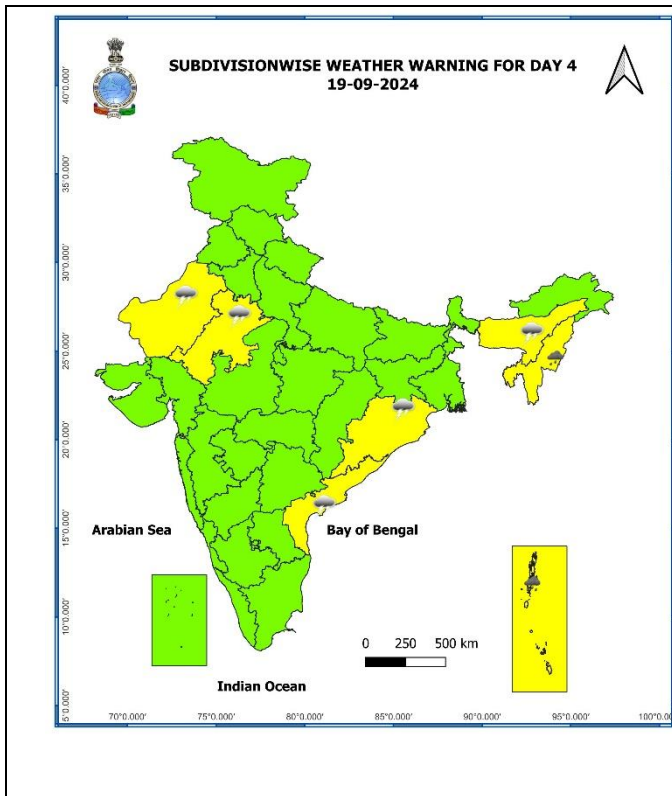
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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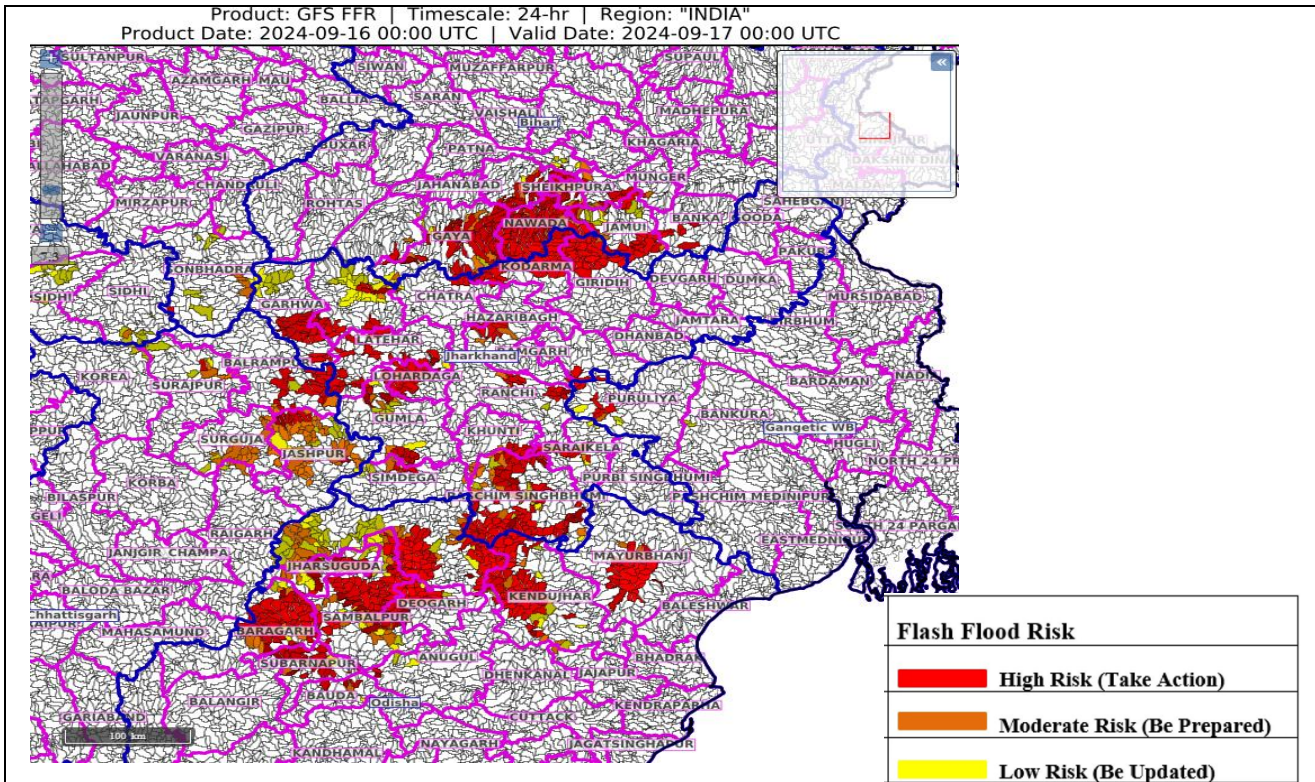


- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

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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.**



## Flash Flood Guidance



### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 17-09-2024 :

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

**Odisha** - Keonjhar, Mayurbhanj, Deogarh, Baragarh, Jharsuguda, Subarnpur, Sambalpur and Sundargarh districts.

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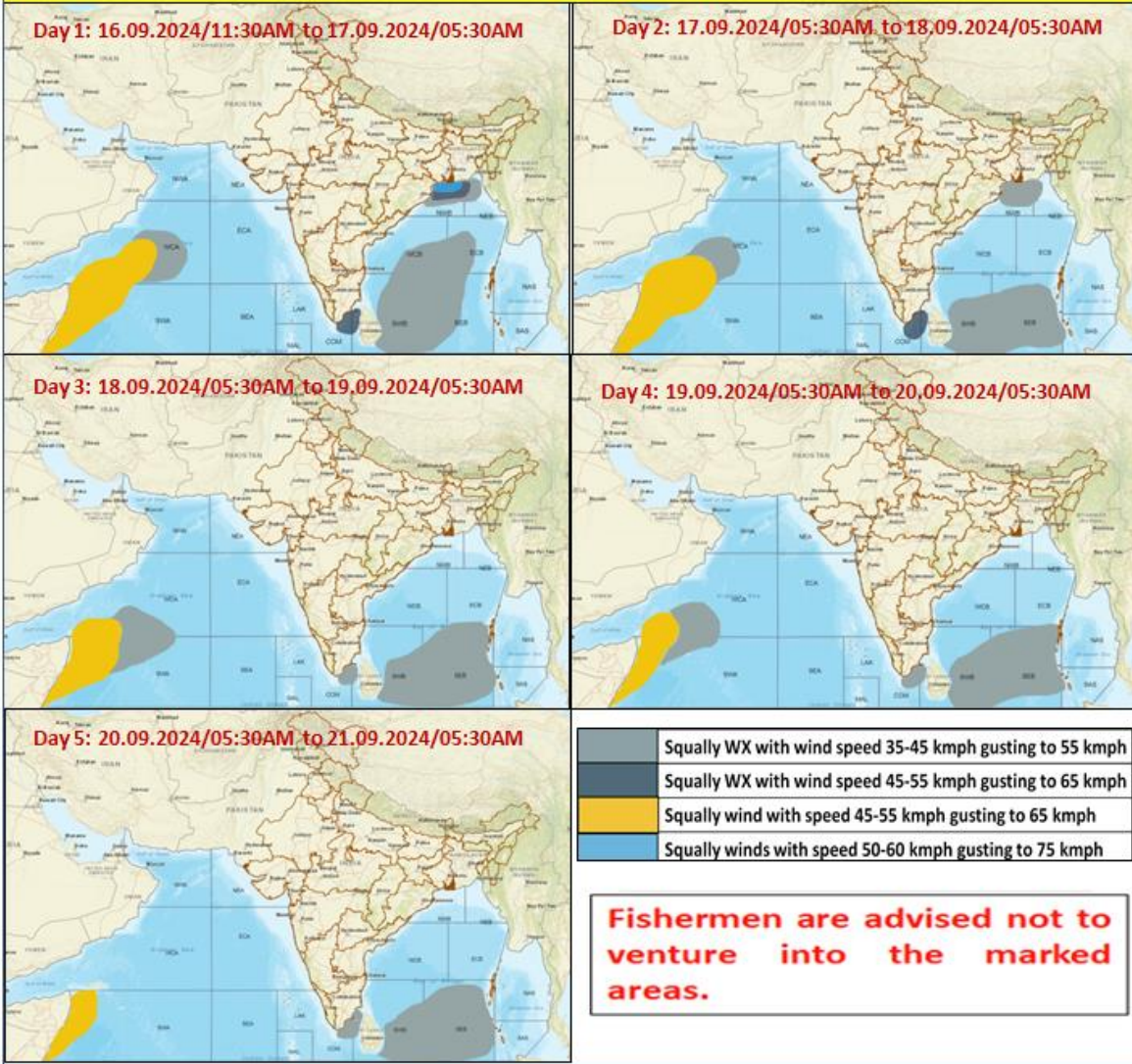
**Jharkhand** - Bokaro, Chatra, Deoghar, Dhanbad, Dumka, East & West Singhbhum, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Khunti, Koderma, Latehar, Lohardaga, Pakur, Palamu, Ramgarh, Ranchi, Sahebganj, and Saraikela districts.

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.

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### Fishermen Warning Graphics



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