



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

**NATIONALBULLETIN NO.: 08 (BOB/05/2024)**

**TIME OF ISSUE: 0915 HOURS IST**

**DATED: 15.09.2024**

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**Sub: Deep Depression over Gangetic West Bengal**

The deep depression over Gangetic West Bengal moved slowly westward with a speed of 8 kmph during past 6 hours and lay centered at 0530 hours IST of today, the 15<sup>th</sup> September 2024, over the same region near latitude 22.6° N and longitude 88.0° E, about 40 km west-northwest of Kolkata (West Bengal), 130 km east-southeast of Bankura (West Bengal), 190 km east of Jamshedpur (Jharkhand) and 290 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 15<sup>th</sup> September. Thereafter, it will continue to move nearly westwards across Jharkhand and North Chhattisgarh and weaken gradually into a depression during subsequent 24 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
15.09.24/0530	22.6/88.0	50-60 gusting to 70	Deep Depression
15.09.24/1730	22.6/87.4	50-60 gusting to 70	Deep Depression
16.09.24/0530	22.7/86.5	45-55 gusting to 65	Depression
16.09.24/1730	22.8/85.0	40-50 gusting to 60	Depression
17.09.24/0530	23.1/83.3	35-45 gusting to 55	Depression

## 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 15<sup>th</sup>; **heavy rainfall** at isolated places on 16<sup>th</sup> September.

**Sub-Himalayan West Bengal:** Light to moderate rainfall at most places is very likely with **heavy rainfall** at isolated places on 15<sup>th</sup> 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 15<sup>th</sup> and **heavy to very heavy rainfall** at isolated places on 16<sup>th</sup> and **heavy rainfall** at isolated places over Odisha 17<sup>th</sup> 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 15<sup>th</sup> and **heavy rainfall** at isolated places over Jharkhand 16<sup>th</sup> & 17<sup>th</sup> September.

**Bihar:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places very likely on 15<sup>th</sup> and **heavy rainfall** at isolated places over Bihar 16<sup>th</sup> & 17<sup>th</sup> September.

**Chhattisgarh:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places on 15<sup>th</sup>-17<sup>th</sup> September.

**East Madhya Pradesh:** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places on 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> September.

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

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

**Mizoram & Tripura:** Light to moderate rainfall at most places is very likely with isolated **heavy rainfall** during 15<sup>th</sup>-16<sup>th</sup> September.

**Assam & Meghalaya:** Light to moderate rainfall at many places is very likely with isolated **heavy rainfall** on 15<sup>th</sup> September.

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

#### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 16-09-2024:

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

**Odisha** - Baleswar, Deogarh, Kendujhar, Mayurbhanj and Sundargarh districts.

**Gangetic West Bengal** - Bankura, Bardhaman, Birbhum, East & West Mednipur, Hoogly, Murshidabad, Nadia, North & South 24 Praganas and Puruliya districts.

**Jharkhand** - Chatra, East Singhbhum, Gumla, Hazaribagh, Khunti, Koderma, Latehar, Lohardaga, Ramgarh, Ranchi, 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.

### (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 15<sup>th</sup> September. It is likely to become 40-50

**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.**

kmph gusting to 60 kmph till evening of 16<sup>th</sup> 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 15<sup>th</sup> September, decrease gradually becoming 45-55 kmph gusting to 65 kmph likely over Jharkhand and adjoining Gangetic West Bengal & north Odisha from morning of 16<sup>th</sup> September 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 till night of 15<sup>th</sup> September.

Subsequently, Rough Sea condition is likely to prevail over north Bay of Bengal and along & off West Bengal-Odisha coasts from morning 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 (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, and Chhattisgarh 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 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 (West Bengal (including Kolkata), Odisha, Bihar, Jharkhand, Chhattisgarh, Bihar, Chhattisgarh)**

- ✓ Fishermen are advised not to venture into north Bay of Bengal till 16<sup>th</sup> September.
- ✓ 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.

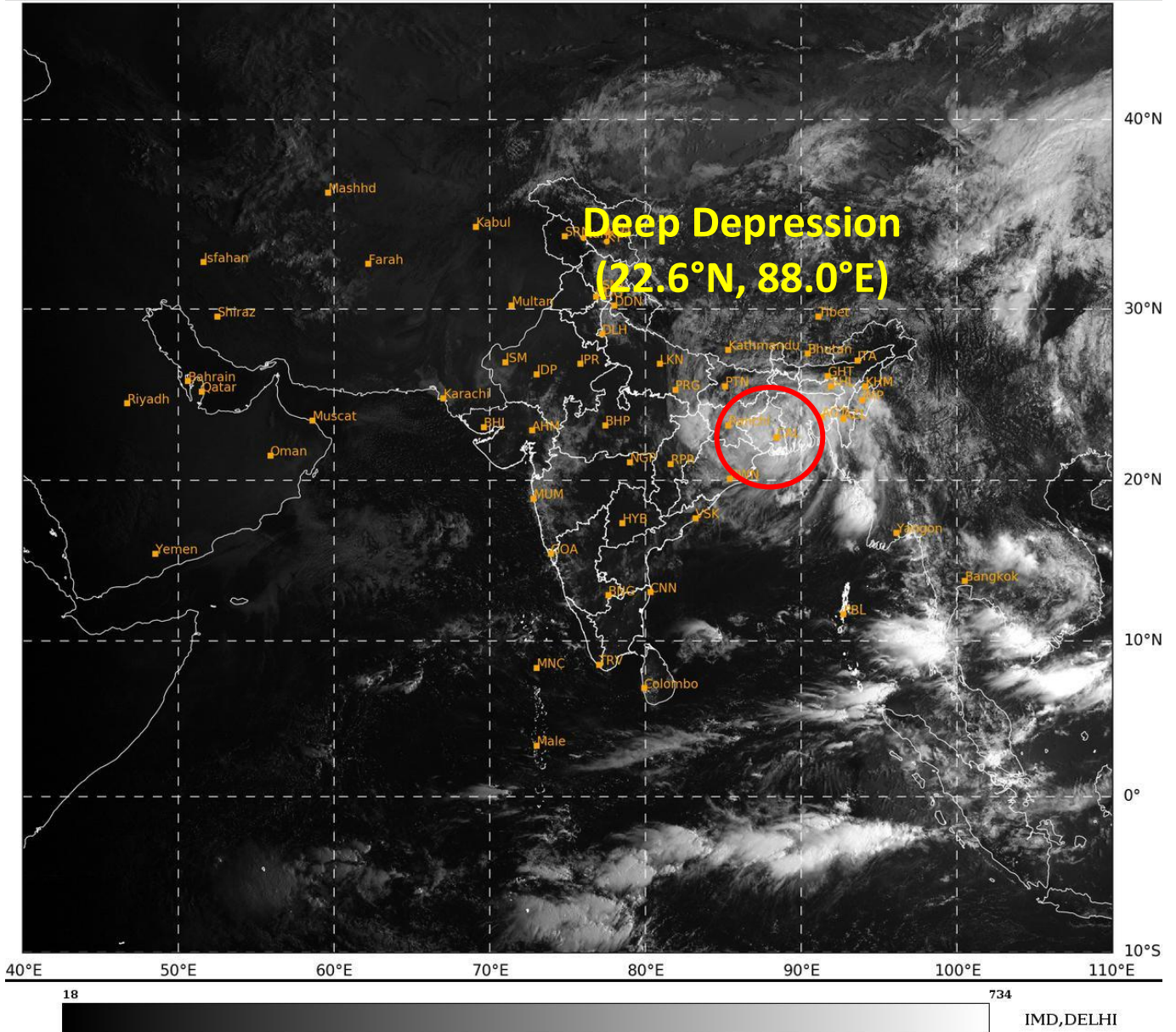
*Significant amount of rainfall (in cm) recorded from 0830 hours IST of 14<sup>th</sup> September to 0530 hours IST of today, the 15<sup>th</sup> September is given in Annexure-I.*

*The next bulletin will be issued at 1230 hrs IST of today, the 15<sup>th</sup> September, 2024.*

**(Dr Ananda Kumar Das)**  
**Scientist-F, 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*

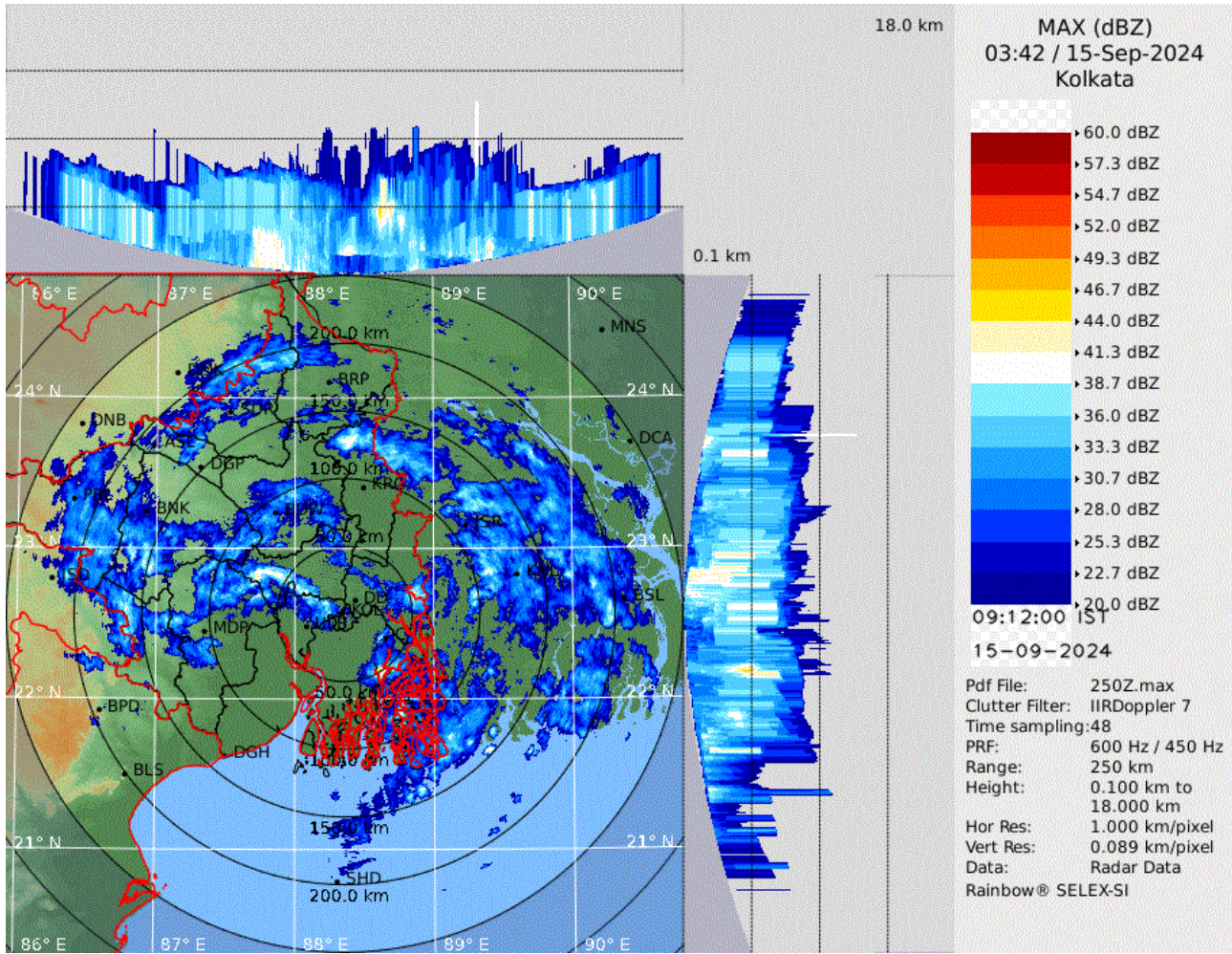
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# Kolkata Radar Image

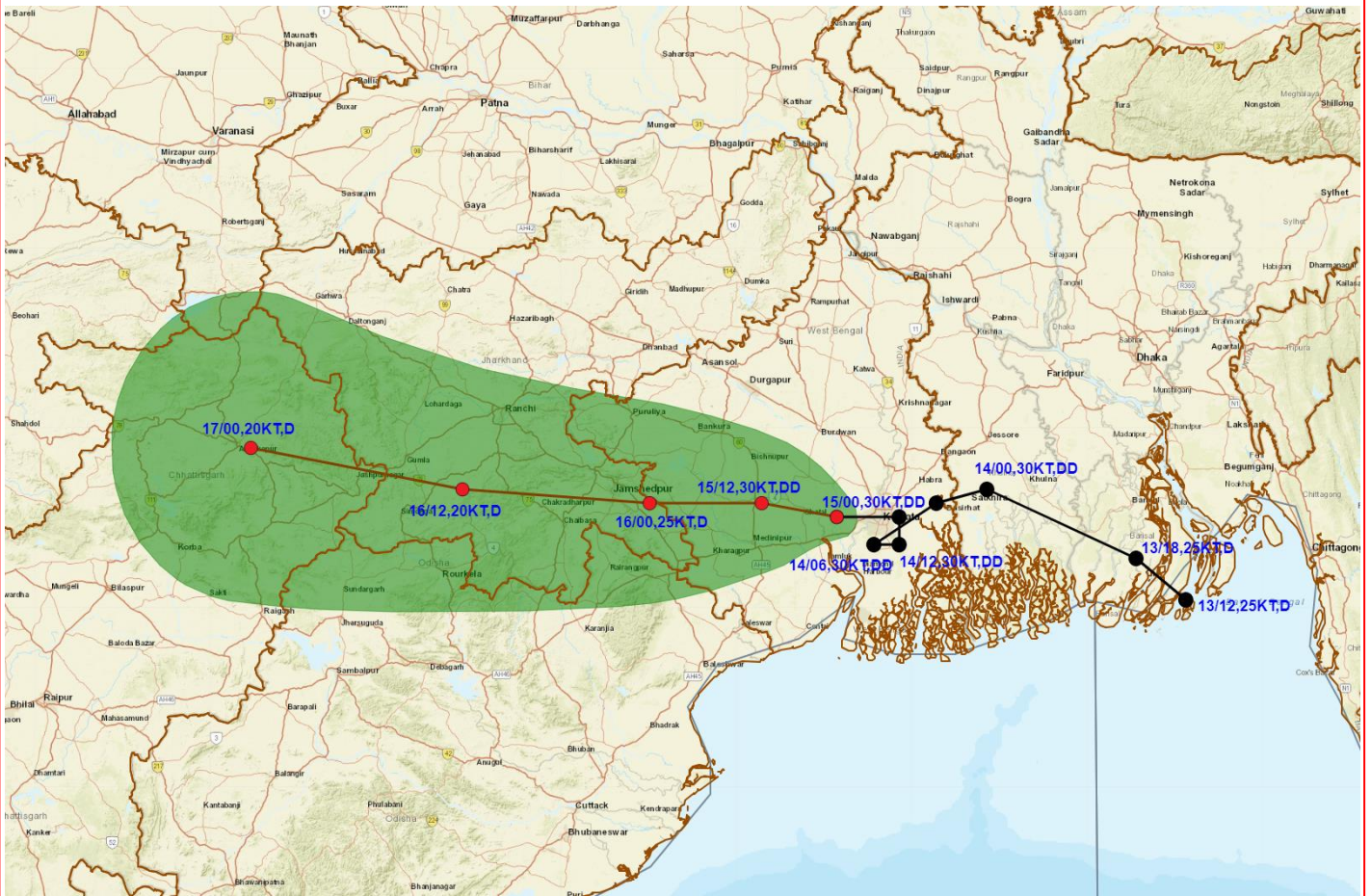


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# OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0000 UTC (0530 IST) OF 15<sup>TH</sup> SEPTEMBER, 2024.



**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 ( $\geq$  120 KT)**

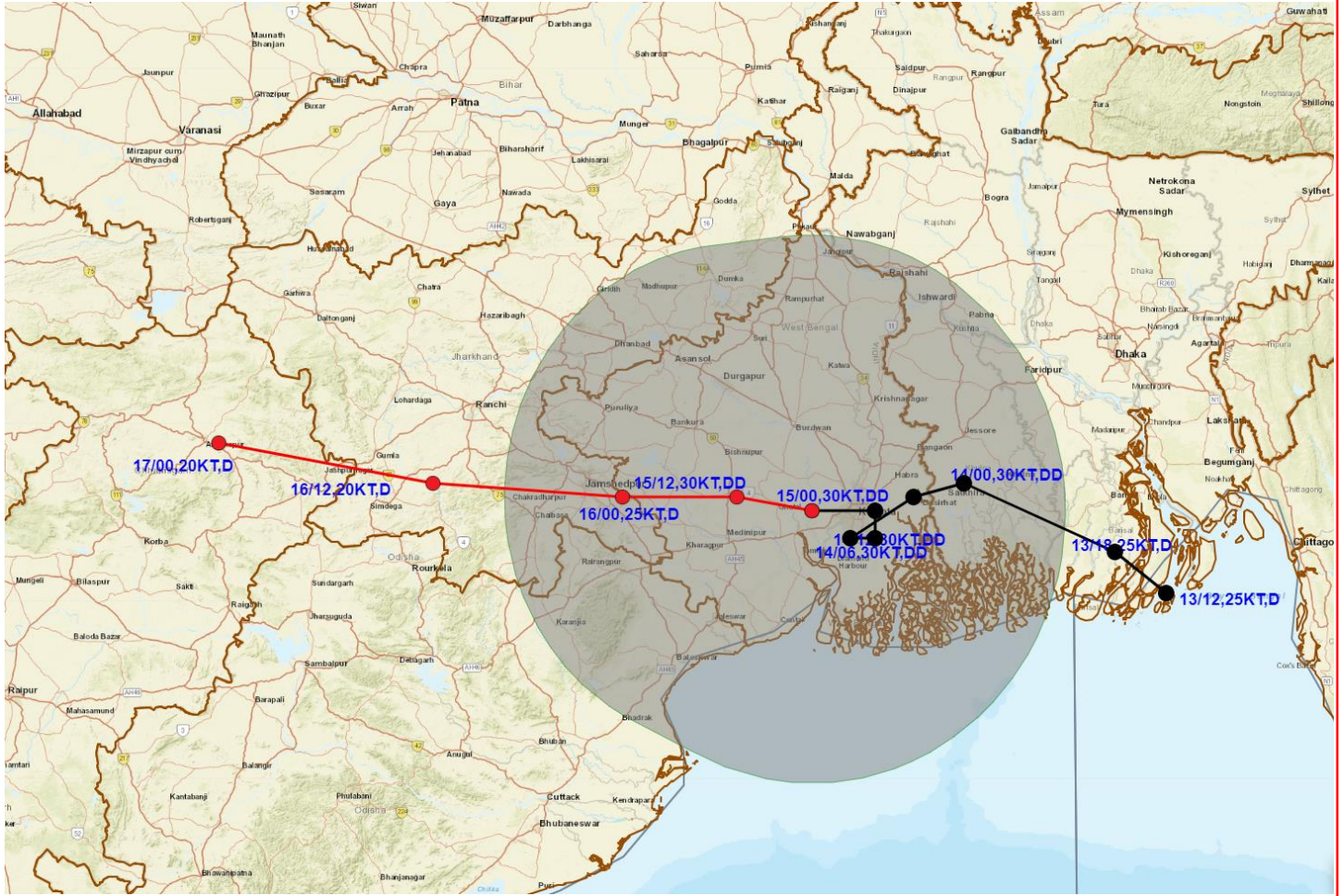
- LESS THAN 34 KT
- 34-47 KT
- $\geq$  48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

**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 0000 UTC (0530 IST) OF 15<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  
**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)

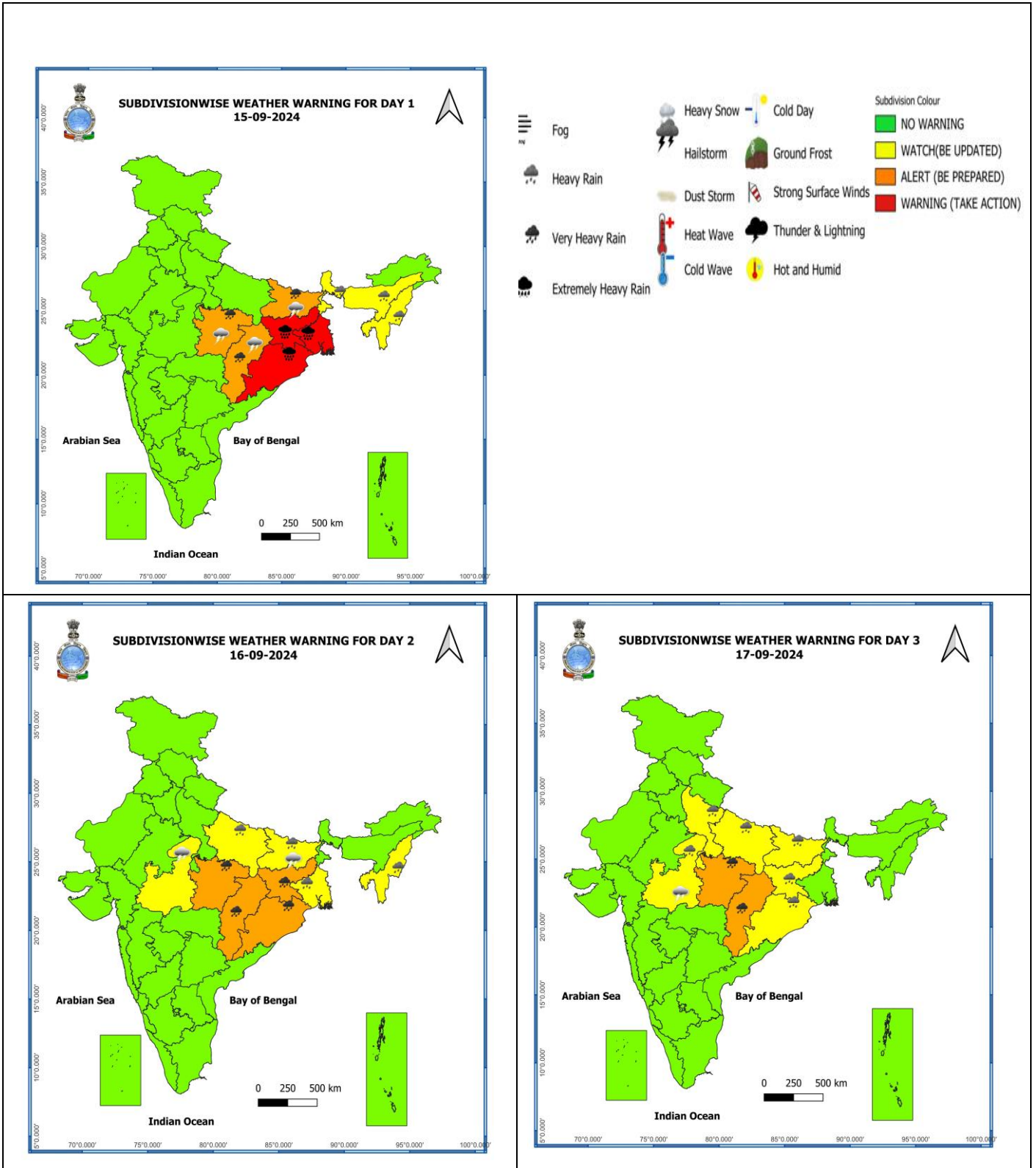
### IMPACT OVER THE SEA

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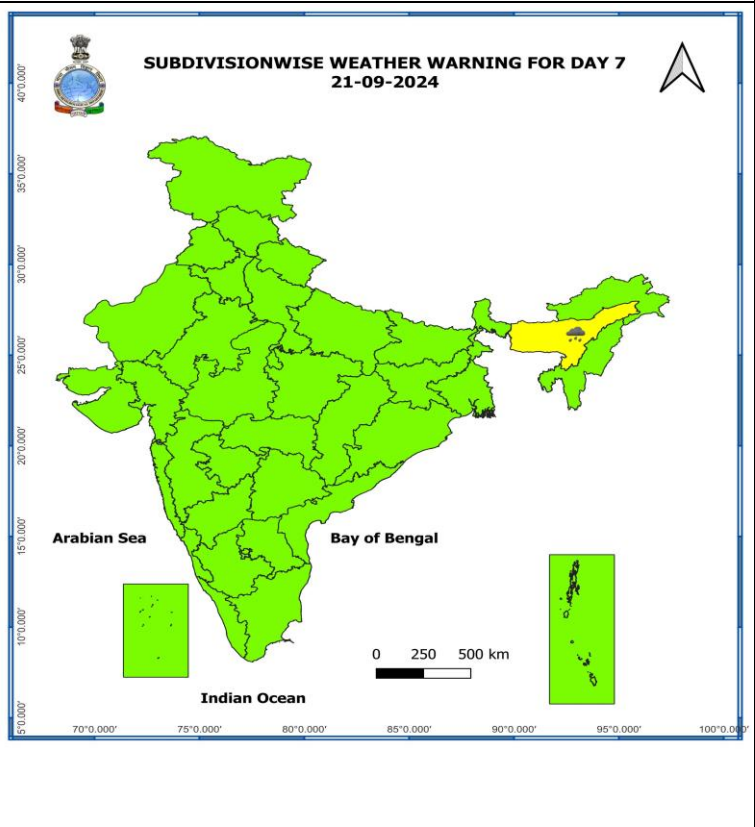
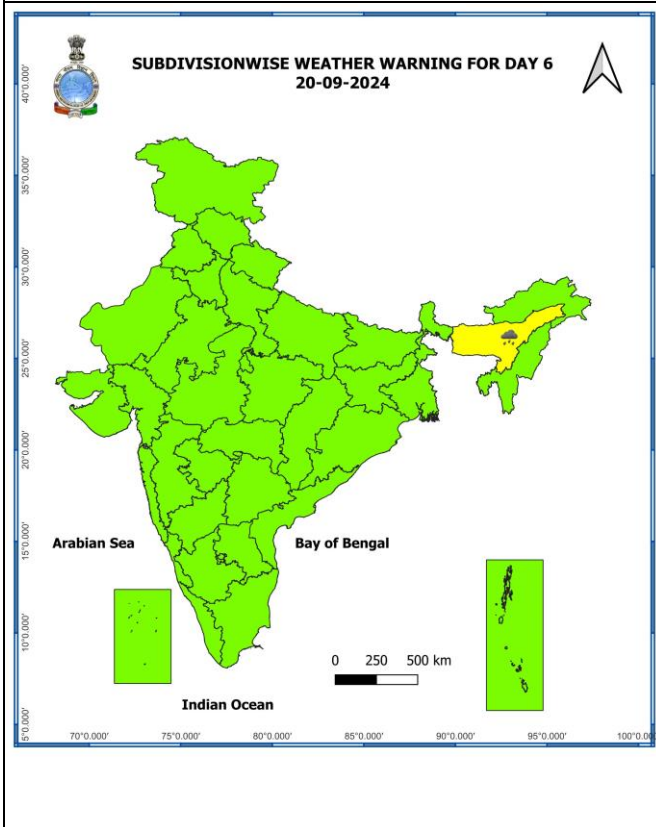
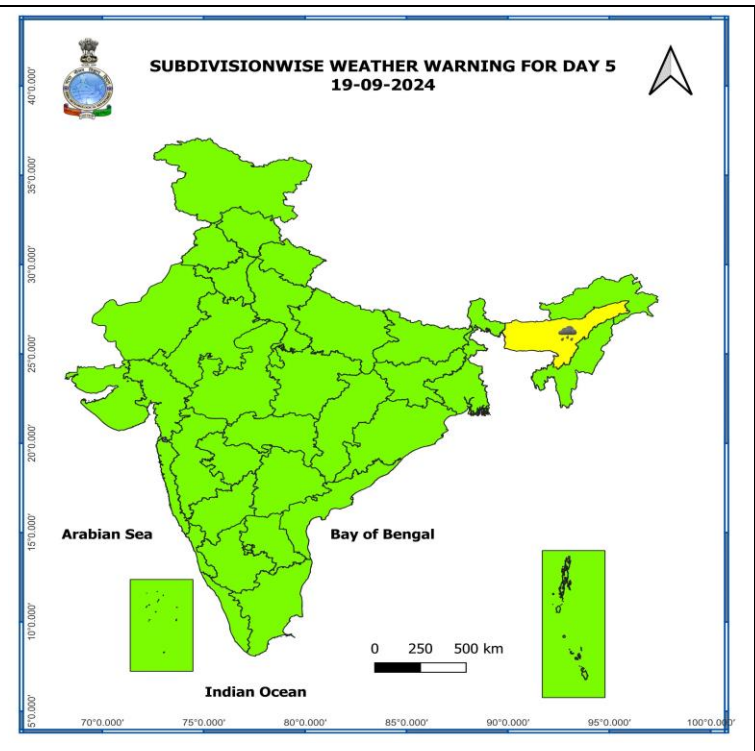
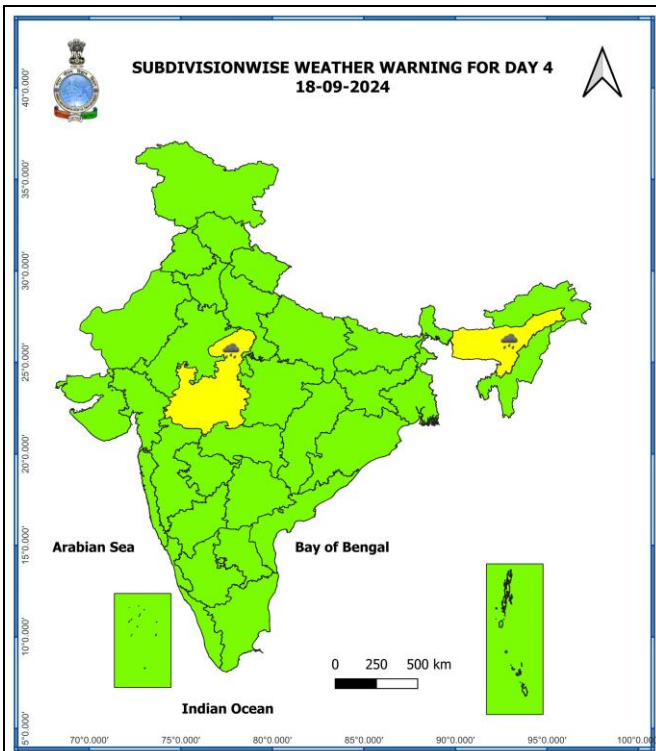
Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

# Warning Graphics



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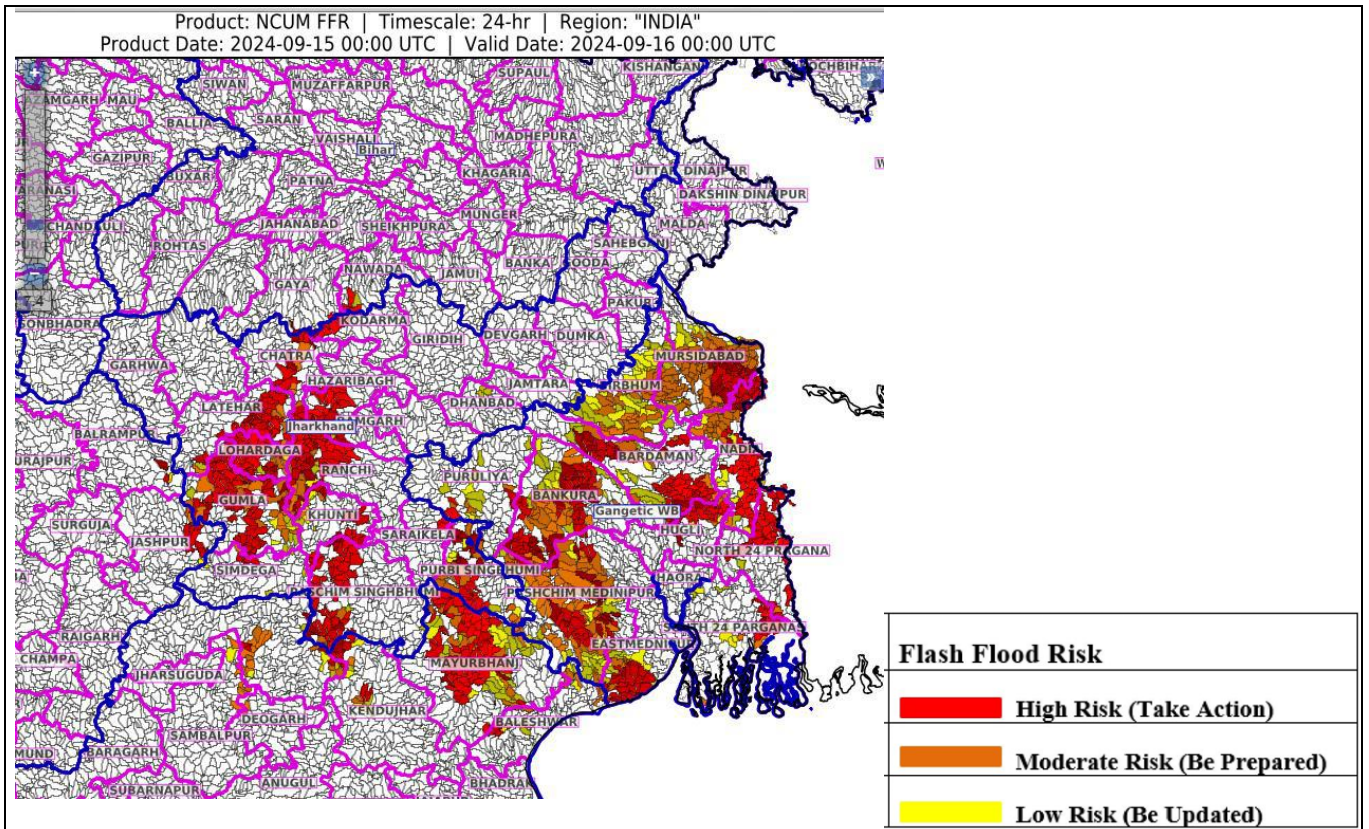




- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases

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## Flash Flood Guidance



### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 16-09-2024:

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

**Odisha** - Baleshwar, Deogarh, Kendujhar, Mayurbhanj and Sundargarh districts.

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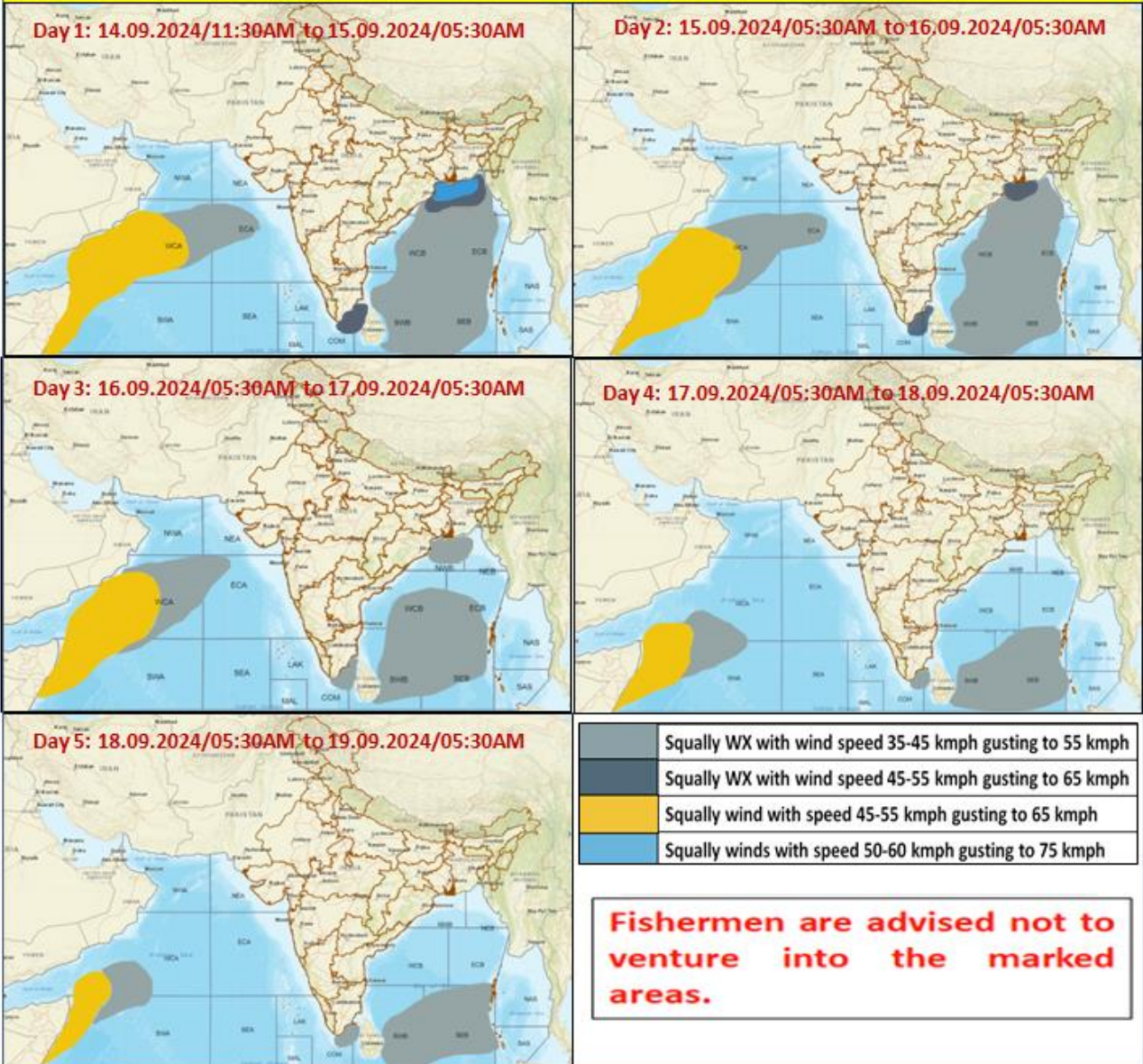
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### Fishermen Warning Graphics



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## Annexure-I

**Significant amount of rainfall (from 0830 hours IST of 14.09.2024 to 0530 hours IST of 15.09.2024) (in cm):**

**Gangetic West Bengal:** Digha 12, Bankura 9, Haldia 8, Diamond Harbour 6, Kolkata Alipore 3;

**Jharkhand:** Daltonganj 8, Jamshedpur 3;

**Odisha:** Balasore 6, Paradip & Bhubaneshwar 2 each;

**Bihar:** Bhagalpur 6;