



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES,
NEW DELHI SPECIAL TROPICAL WEATHER OUTLOOK**

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 15.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0600 UTC OF 15.09.2024 BASED ON 0300 UTC OF 15.09.2024.

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 0300 UTC OF TODAY, THE 15TH SEPTEMBER 2024, OVER THE SAME REGION NEAR LATITUDE 22.6° N AND LONGITUDE 87.8° E, ABOUT 60 KM WEST OF KOLKATA (42807), 110 KM SOUTHEAST OF BANKURA (42706), 170 KM EAST OF JAMSHEDPUR (42799) AND 270 KM EAST-SOUTHEAST OF RANCHI (42701).

IT IS LIKELY TO MOVE SLOWLY, NEARLY WESTWARDS ACROSS GANGETIC WEST BENGAL AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION TILL 1200 UTC 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.

THE DEEP DEPRESSION IS UNDER CONTINUOUS SURVEILLANCE BY THE DOPPLER WEATHER RADAR AT KOLKATA.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
15.09.24/0300	22.6/87.8	50-60 GUSTING TO 70	DEEP DEPRESSION
15.09.24/1200	22.7/87.3	50-60 GUSTING TO 70	DEEP DEPRESSION
16.09.24/0000	22.7/86.4	45-55 GUSTING TO 65	DEPRESSION
16.09.24/1200	22.8/85.0	40-50 GUSTING TO 60	DEPRESSION
17.09.24/0000	23.1/83.3	35-45 GUSTING TO 55	DEPRESSION

AT 0300 UTC, AS PER INSAT 3DR IMAGERY ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTHWEST BIHAR, NORTH CHHATTISGARH, JHARKHAND, NORTH ODISHA, GANGETIC WEST BENGAL, BANGLADESH, NORTH BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE MINUS 80-93 DEG CEL) AND

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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MODERATE TO INTENSE CONVECTION OVER SOUTHEAST UTTAR PRADESH, SOUTH ODISHA, SUB-HIMALAYAN WEST BENAGL, MEGHALAYA, ASSAM, MANIPUR, MIZORAM AND TRIPURA (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 60-70 DEG CEL).

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 991HPA.

AT 0300 UTC, MEDINIPUR REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 991.7 HPA WITH 24 HOUR PRESSURE CHANGE OF -6.4 HPA AND MAXIMUM WIND SPEED (MSW) OF 320°/05KT. KOLKATA REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 992.1 HPA WITH MAXIMUM WIND SPEED (MSW) OF 180°/01KT.

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 1200 UTC OF 15TH SEPTEMBER. IT IS LIKELY TO BECOME 40-50 KMPH GUSTING TO 60 KMPH TILL 1200 UTC OF 16TH SEPTEMBER AND DECREASE THEREAFTER.

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 1200 UT OF 15TH SEPTEMBER.

SUBSEQUENTLY, ROUGH SEA CONDITION IS LIKELY TO PREVAIL OVER NORTH BAY OF BENGAL AND ALONG & OFF WEST BENGAL-ODISHA COASTS TILL 0000 UTC OF 16TH SEPTEMBER AND IMPROVE THERAFTER.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTH BAY OF BENGAL AND ALONG & OFF BANGLADESH, WEST BENGAL, AND ODISHA COASTS TILL 16TH SEPTEMBER.

REMARKS:

CURRENT ENVIRONMENTAL CONDITONS INDICATE THAT THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL IS LYING IN A FAVOURABLE ENVIRONMENT. MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE GREATER THAN 1. IT IS LIKELY TO CONTINUE IN SAME PHASE DURING NEXT 2 DAYS AND THEN LIKELY TO MOVE TO PHASE 6. THE NCICS BASED FORECAST INDICATES PERSISTENCE OF STRONG WESTERLY WINDS (5-7 MPS) OVER SOUTH-CENTRAL BAY WITH STRONG EASTERLY WINDS (5-7 MPS) OVER EASTERN PARTS OF INDIA, PRESENCE OF EQUATORIAL ROSSBY WAVES, KELVIN WAVES AND MJ WAVES. ALL THESE FEATURES ARE SUPPORTING THE SYSTEM TO MAINTAIN ITS INTENSITY.

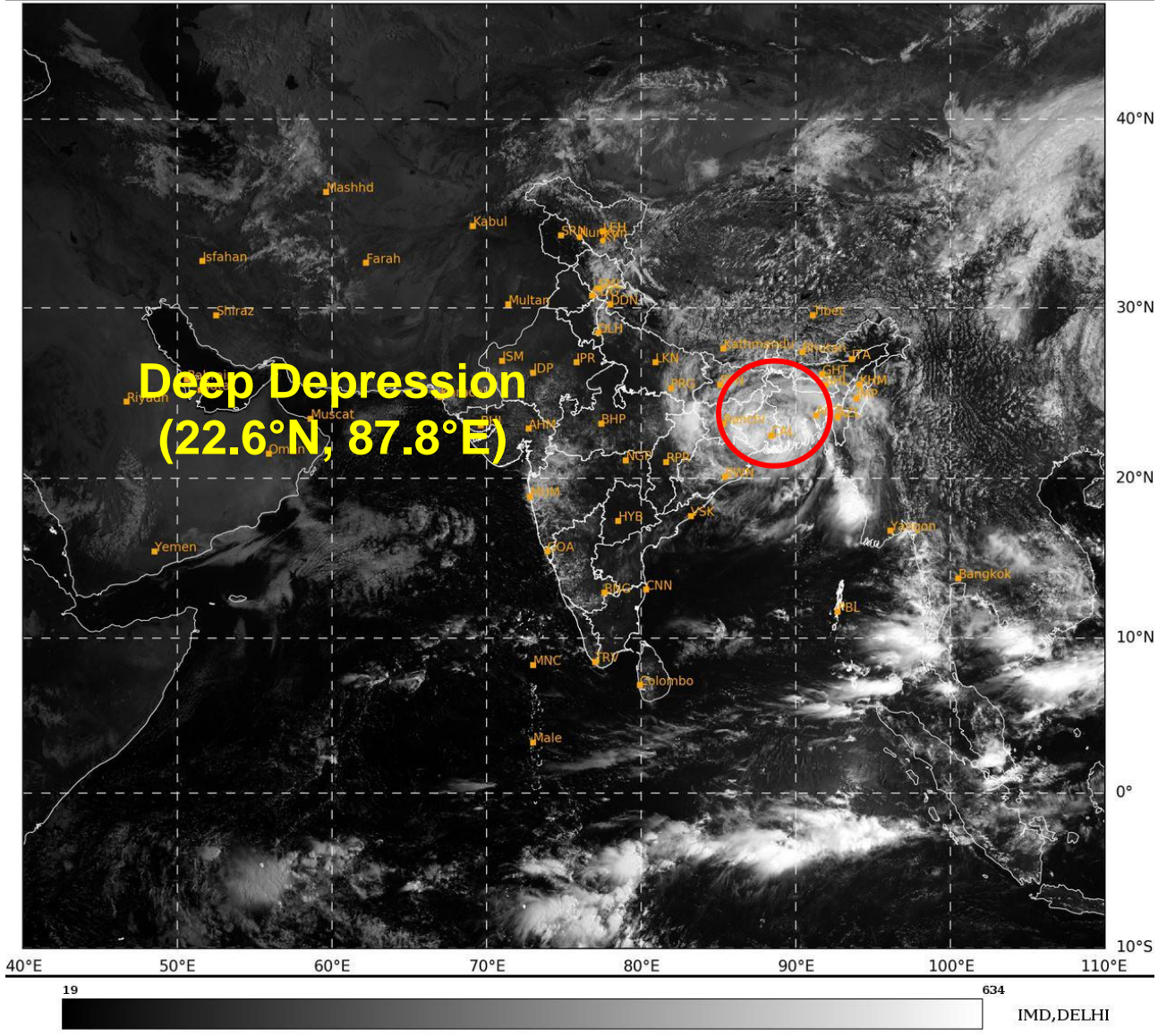
THE LOW LEVEL CONVERGENCE IS AROUND $10 \times 10^{-5} \text{ S}^{-1}$ AND IS ELONGATED AROUND SYSTEM CENTER. UPPER LEVEL DIVERGENCE HAS INCREASED & IS

AROUND $20 \times 10^{-5} \text{ S}^{-1}$ ORIENTED IN THE NORTHEAST–SOUTHWEST DIRECTION. THE WIND SHEAR IS LOW TO MODERATE (15-20 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND $200 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE AND EXTENDS UP TO 200 HPA ($50 \times 10^{-5} \text{ S}^{-1}$).

MOST OF THE NWP MODELS INDICATE THAT THE SYSTEM IS LIKELY TO MOVE SLOWLY NEARLY WESTWARDS AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION DURING NEXT 12 HOURS. MOST OF THE MODELS ARE INDICATING WEAKENING OF THE SYSTEM ON 16TH SEPTEMBER (BETWEEN 0000 TO 1200 UTC).

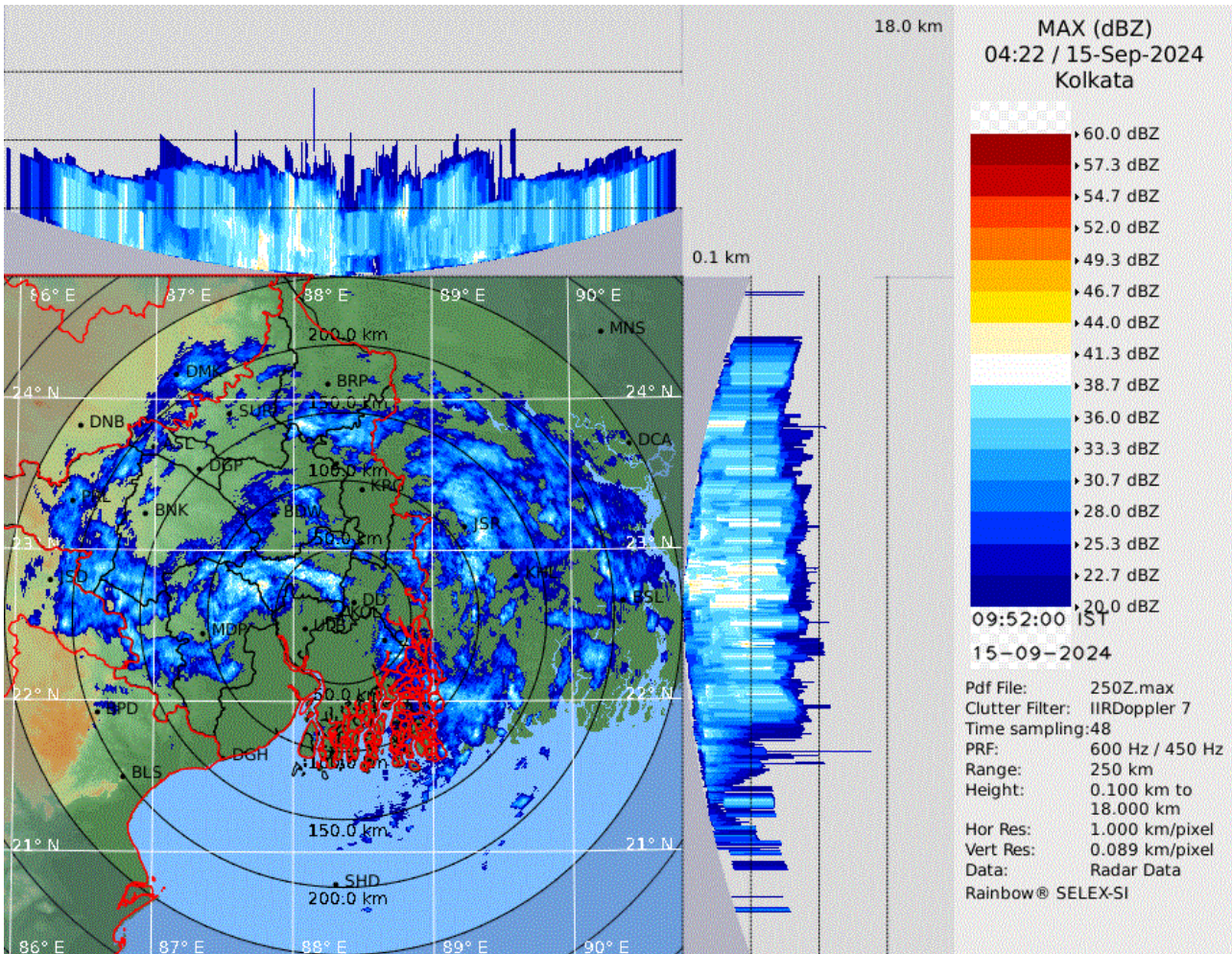
IN VIEW OF ALL THE ABOVE, THE DEEP DEPRESSION IS LIKELY TO MOVE SLOWLY, NEARLY WESTWARDS ACROSS GANGETIC WEST BENGAL AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION TILL 1200 UTC OF TODAY, THE 15TH SEPTEMBER. THEREAFTER, IT IS LIKELY TO WEAKEN GRADUALLY INTO A DEPRESSION AND MOVE NEARLY WESTWARDS ACROSS JHARKHAND AND NORTH CHHATTISGARH DURING SUBSEQUENT 48 HOURS.

AKHIL SRIVASTAVA
SC.-D, RSMC NEW DELHI



Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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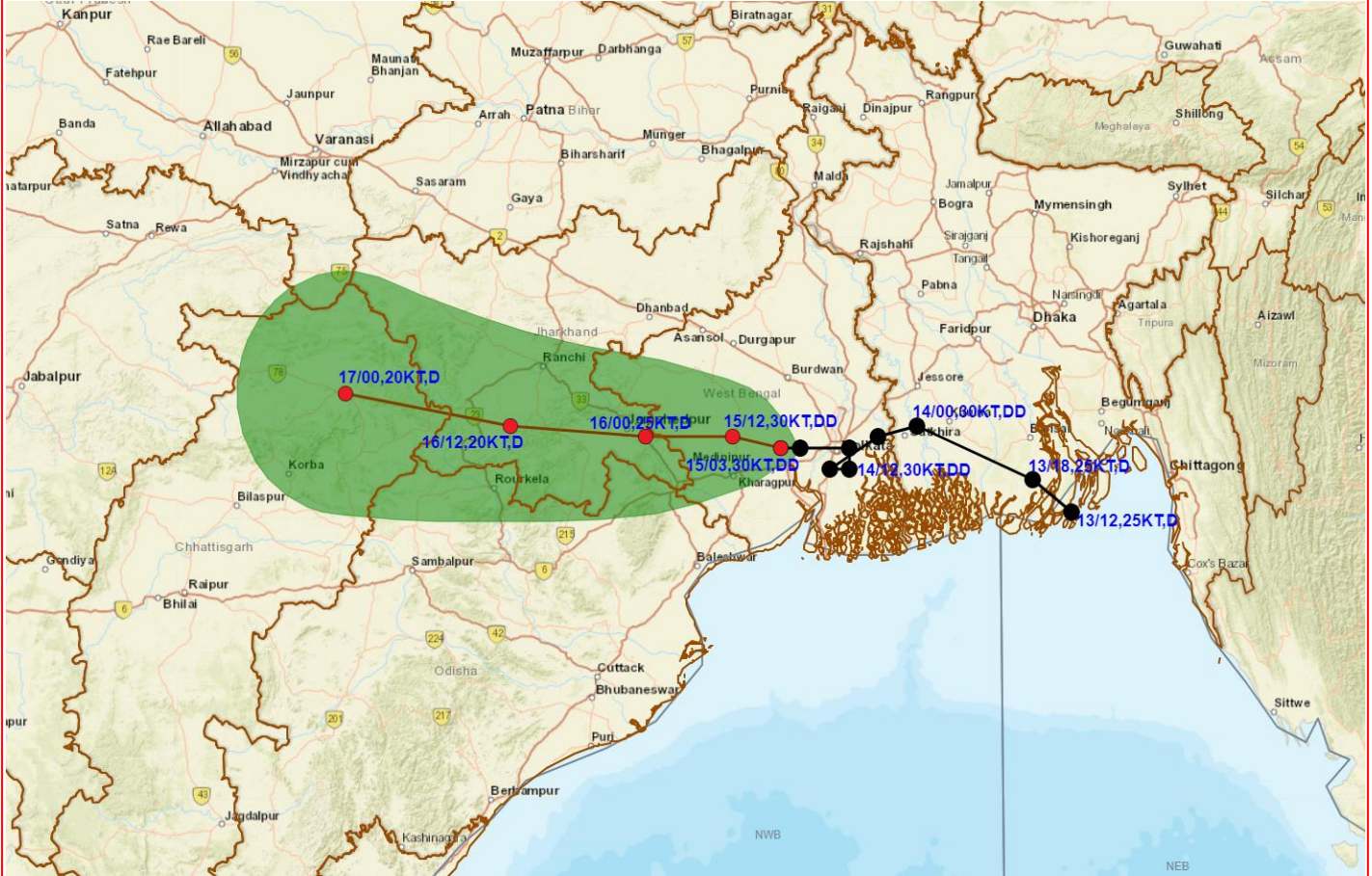
Kolkata Radar Image



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OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0300 UTC (0830 IST) OF 15TH SEPTEMBER, 2024.



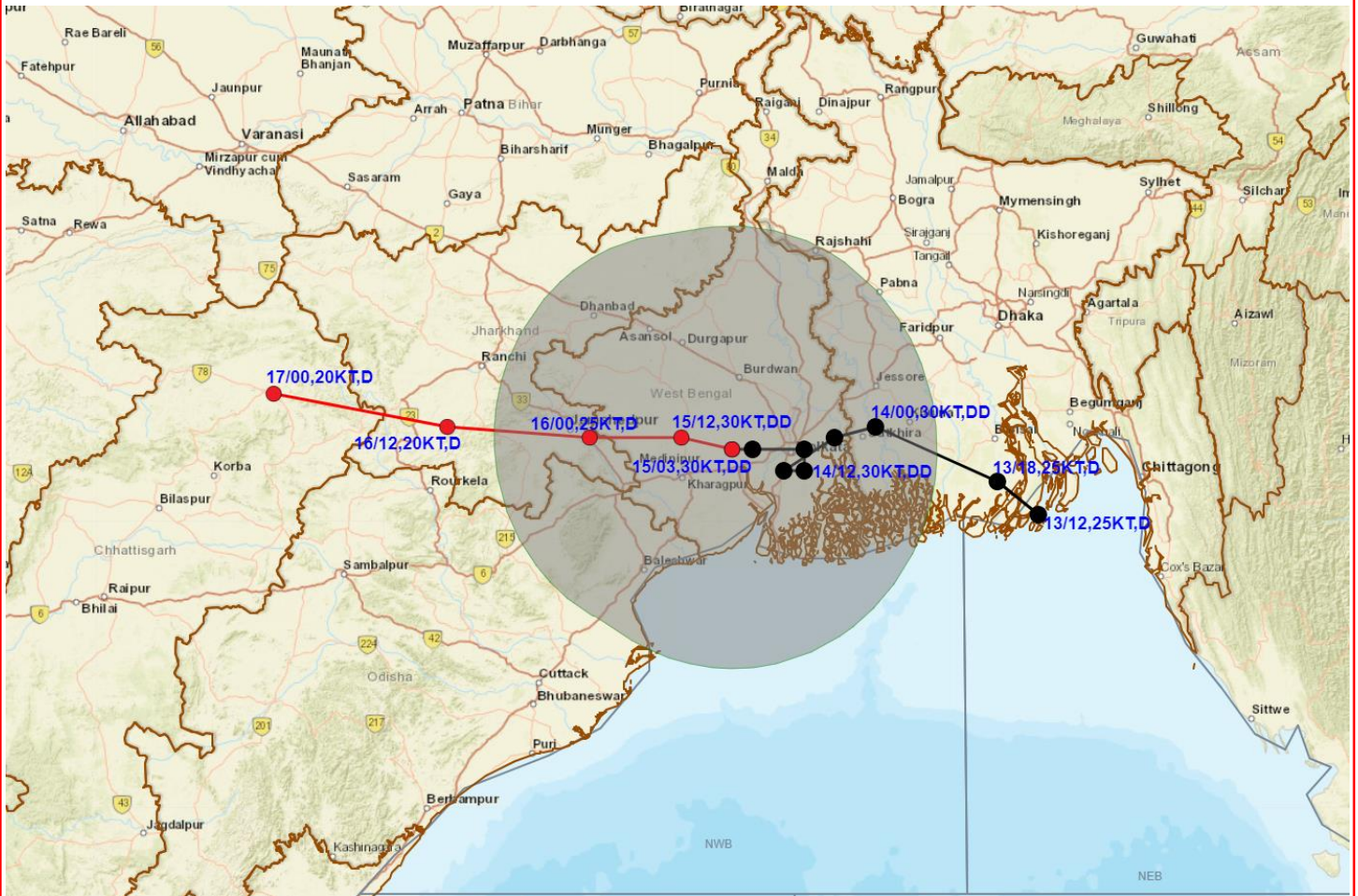
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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

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OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0300 UTC (0830 IST) OF 15TH 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)
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SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

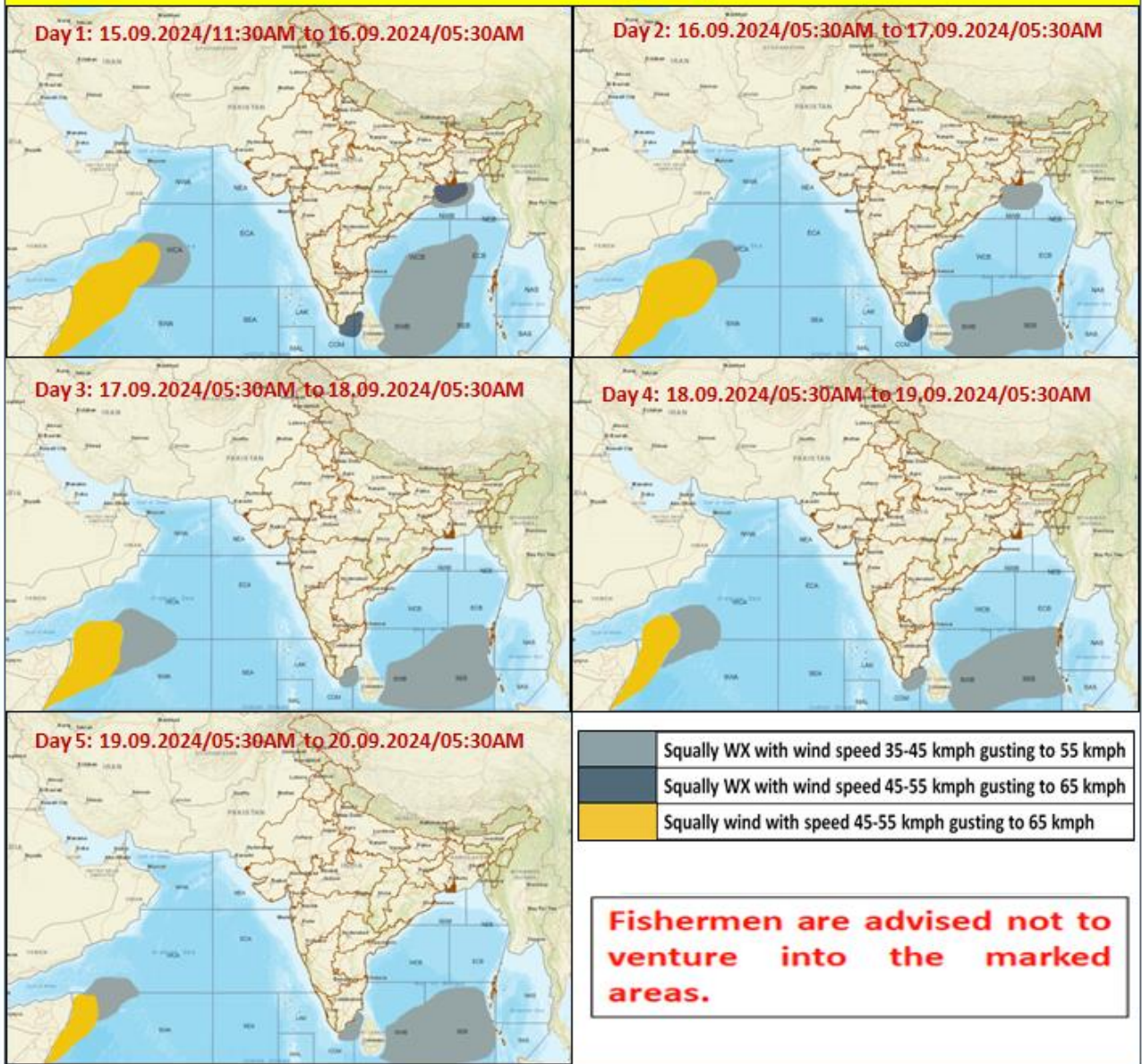
● LESS THAN 34 KT
 ○ 34-47 KT
 ⊙ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ⊕ CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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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Fishermen Warning Graphics



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