



**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 0330 UTC OF 15.09.2024 BASED ON 0000 UTC OF 15.09.2024.**

**SUB: DEEP DEPRESSION OVER GANGETIC WEST BENGAL**

THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL MOVED SLOWLY WESTWARD DURING PAST 6 HOURS AND LAY CENTERED AT 0000 UTC 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 (42807, WEST BENGAL), 130 KM EAST-SOUTHEAST OF BANKURA (42706, WEST BENGAL), 190 KM EAST OF JAMSHEDPUR (42799, JHARKHAND) AND 290 KM EAST-SOUTHEAST OF RANCHI (42701, JHARKHAND).

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 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.

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
15.09.24/0000	22.6/88.0	50-60 GUSTING TO 70	DEEP DEPRESSION
15.09.24/1200	22.6/87.4	50-60 GUSTING TO 70	DEEP DEPRESSION
16.09.24/0000	22.7/86.5	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 0000 UTC, AS PER INSAT 3DR IMAGERY, ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH CHHATTISGARH, JHARKHAND, ODISHA, GANGETIC WEST BENGAL, BANGLADESH, TRIPURA (MINIMUM CLOUD TOP TEMPERATURE IS

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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MINUS 80-93<sup>0</sup>C) AND MODERATE TO INTENSE CONVECTION LAY OVER EAST PART OF EAST UTTAR PRADESH, BIHAR, NORTH CHHATTISGARH, SUB-HIMALAYAN WEST BENGAL, MEGHALAYA, ASSAM, MIZORAM, MANIPUR NORTH BAY OF BENGAL

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 990HPA.

AT 0000 UTC, KOLKATA-ALIPORE REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 990.1 HPA WITH MAXIMUM WIND SPEED (MSW) OF 180°/02KT. HALDIA REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 990.7 HPA WITH MSW OF 290°/02KT.

**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 15<sup>TH</sup> SEPTEMBER. IT IS LIKELY TO BECOME 40-50 KMPH GUSTING TO 60 KMPH TILL 1200 UTC 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 1200 UTC OF 15<sup>TH</sup> SEPTEMBER AND DECREASE GRADUALLY BECOMING 45-55 KMPH GUSTING TO 65 KMPH LIKELY OVER JHARKHAND GANGETIC WEST BENGAL AND ADJOINING NORTH ODISHA & JHARKHAND FROM 0000 UTC OF 16<sup>TH</sup> 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 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 TILL 0000 UTC OF 16<sup>TH</sup> 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 16<sup>TH</sup> 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

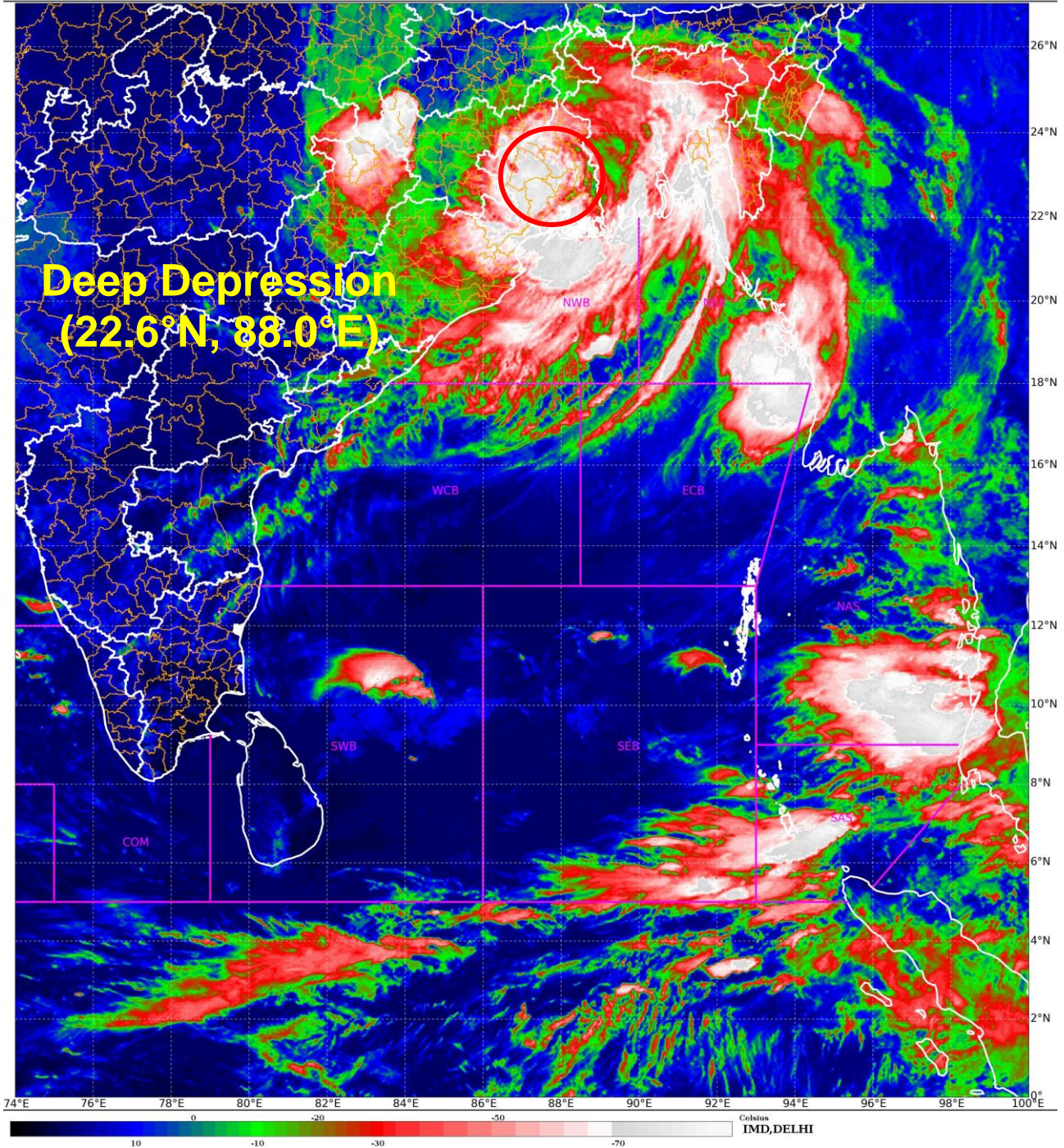
MPS) OVER SOUTH-CENTRAL BAY WITH STRONG EASTERLY WINDS (5-7 MPS) OVER EASTERN PARTS OF INDIA, PRESENCE OF EQUATORIAL ROSSBY WAVES, KELVIN WAVES AND MJ WAVES. ALL THESE FEATURES ARE SUPPORTING THE SYSTEM TO MAINTAIN ITS INTENSITY.

THE LOW LEVEL CONVERGENCE IS AROUND  $10 \times 10^{-5} \text{ S}^{-1}$  AND IS NORTHWEST-SOUTHEAST ORIENTED. UPPER LEVEL DIVERGENCE IS AROUND  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. 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 SOUTH 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. ECMWF MODEL IS INDICATING WEAKENING OF THE SYSTEM AROUND 1200 UTC OF 16TH SEPTEMBER. HOWEVER, IT IS INDICATING REINTENSIFICATION OF SYSTEM INTO A DEEP DEPRESSION ON 17TH SEPTEMBER. GFS IS INDICATING WEAKENING OF THE SYSTEM ON 16TH INTO A DEPRESSION. THEREAFTER, IT IS INDICATING FURTHER WEAKENING. THERE IS LARGE DIVERGENCE AMONG VARIOUS MODELS WRT INTENSITY AND MOVEMENT OF SYSTEM.

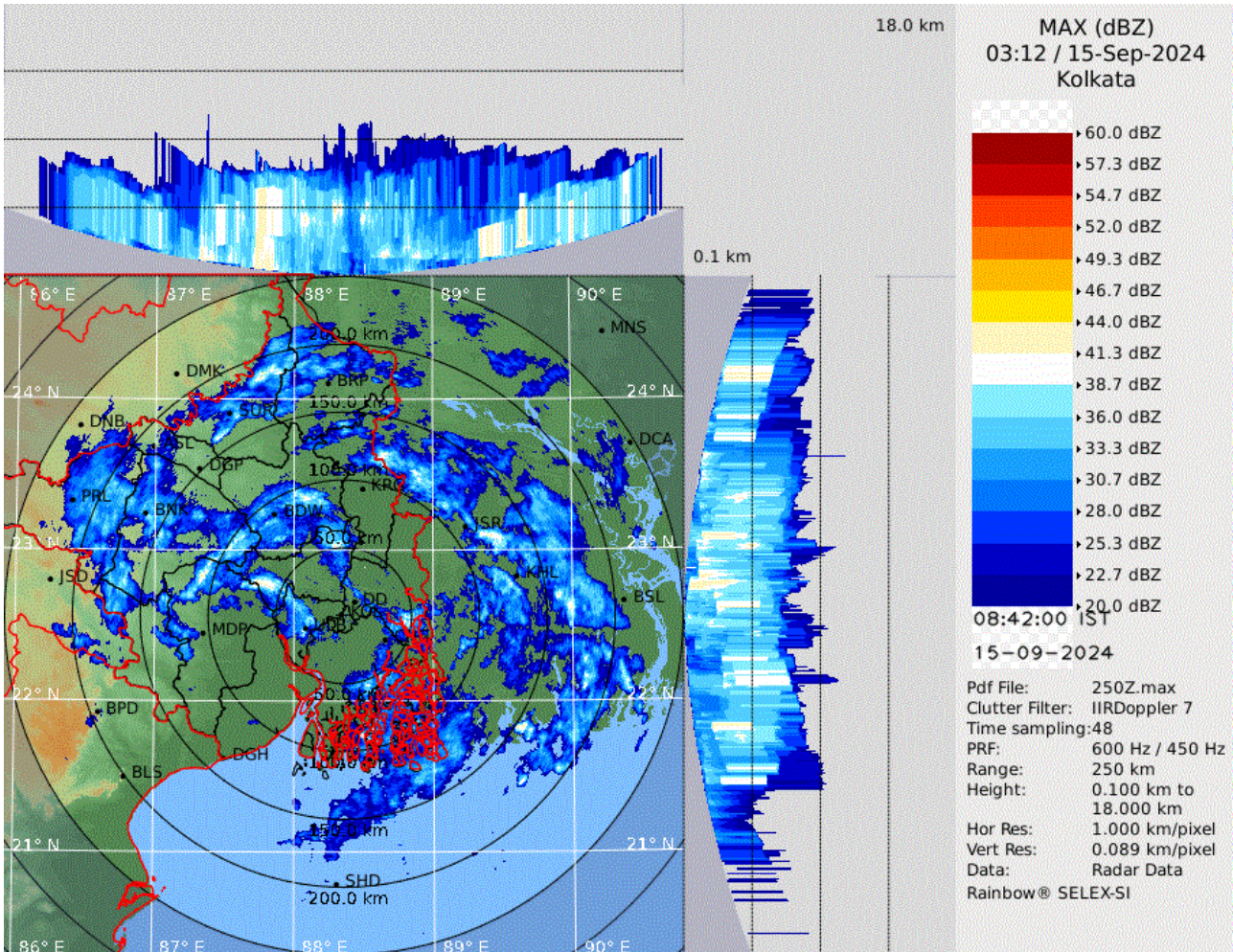
IN VIEW OF ALL THE ABOVE, THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL IS LIKELY TO MOVE SLOWLY, NEARLY WESTWARDS ACROSS GANGETIC WEST BENGAL AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION TILL 1200 UTC OF THE 15TH SEPTEMBER. THEREAFTER, IT WILL CONTINUE TO MOVE SLOWLY NEARLY WESTWARDS ACROSS JHARKHAND AND NORTH CHHATTISGARH AND WEAKEN GRADUALLY INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

DR. TRISANU BANIK  
SC.-D, RSMC NEW DELHI



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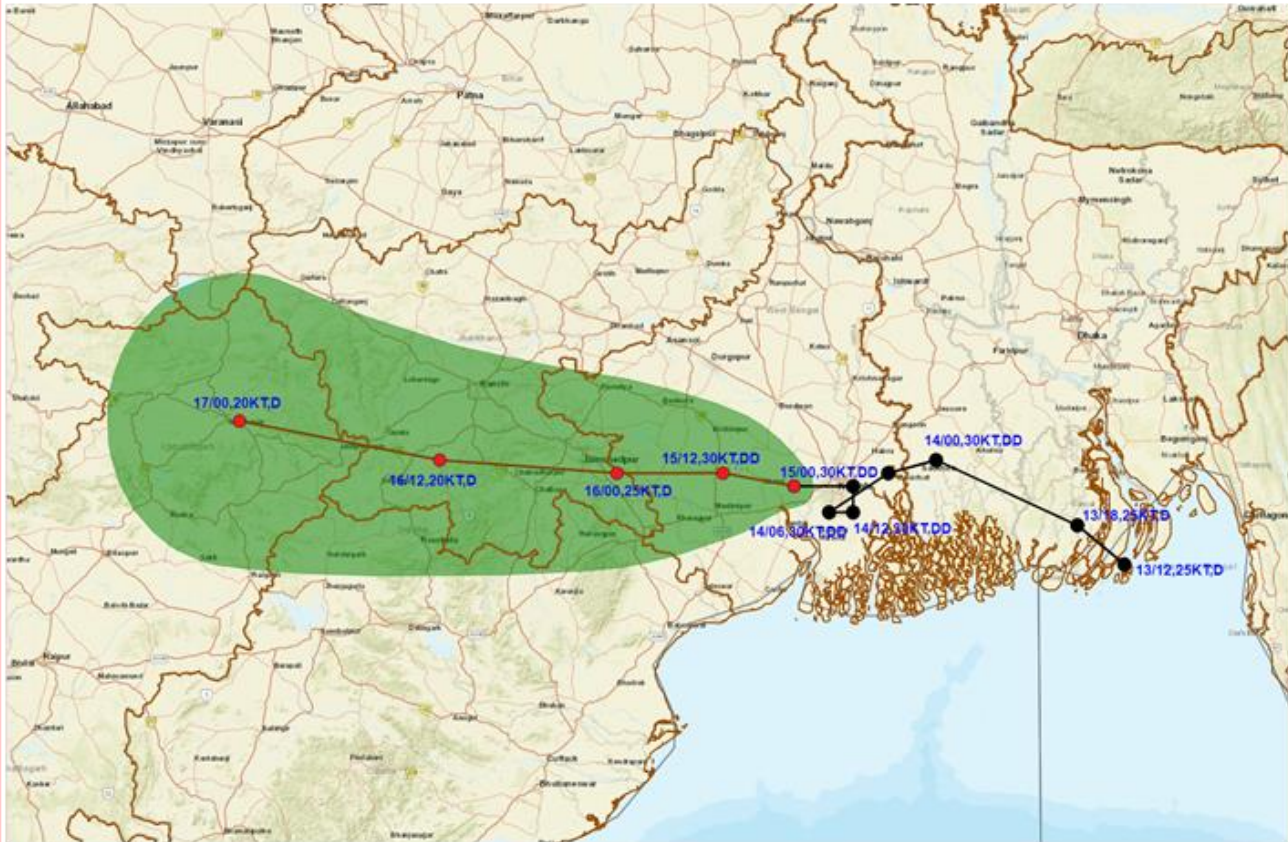
## Kolkata Radar Image



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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.**



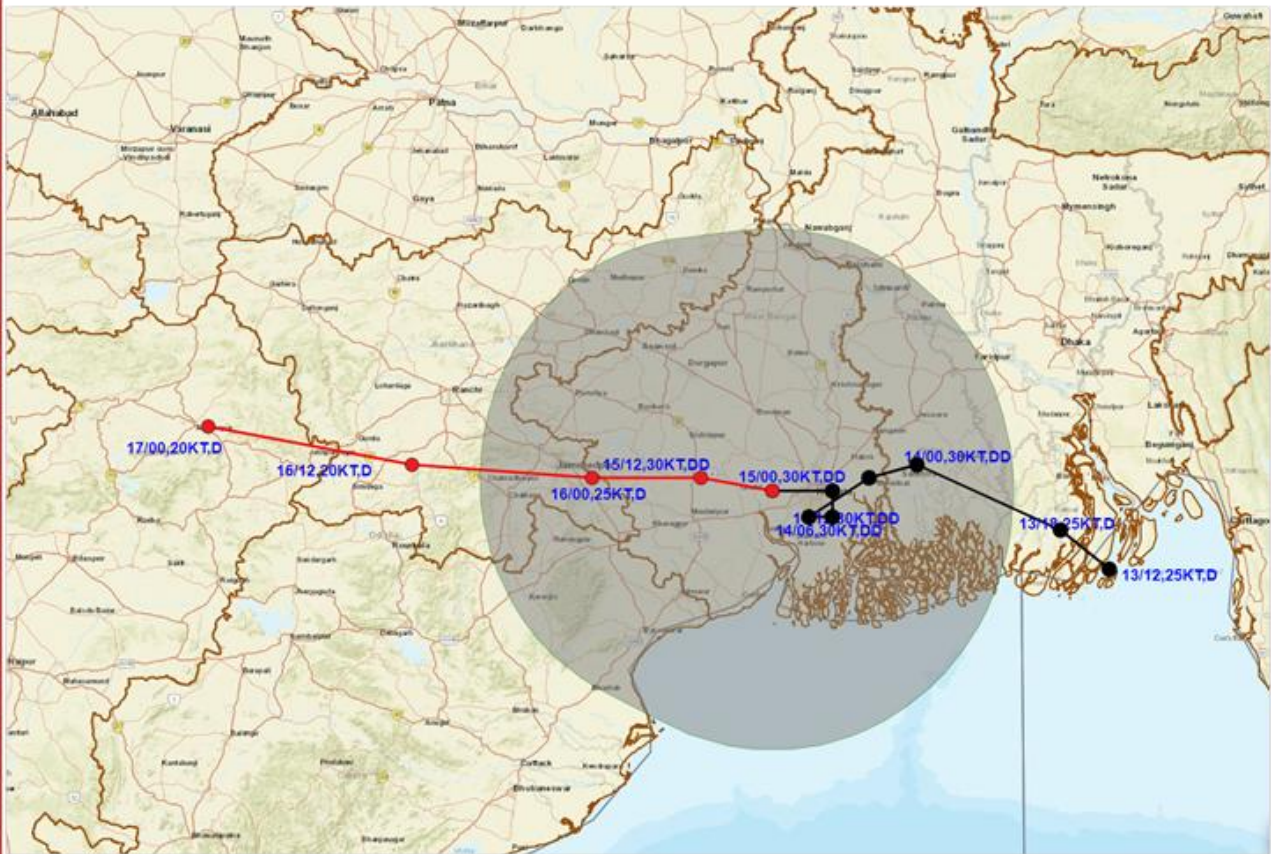
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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

