



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 14.09.2024**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 1530 UTC OF 14.09.2024 BASED ON 1200 UTC OF 14.09.2024.**

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

THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL AND ADJOINING BANGLADESH MOVED WEST-SOUTHWESTWARDS AND LAY OVER GANGETIC WEST BENGAL AT 0600 UTC OF TODAY, THE 14<sup>TH</sup> SEPTEMBER, 2024. IT REMAINED PRACTICALLY STATIONARY DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 14<sup>TH</sup> SEPTEMBER 2024, OVER GANGETIC WEST BENGAL NEAR LATITUDE 22.4° N AND LONGITUDE 88.3° E, ABOUT 20 KM SOUTH-SOUTHWEST OF KOLKATA (42807), 170 KM SOUTHEAST OF BANKURA (42706), 220 KM EAST-SOUTHEAST OF JAMSHEDPUR (42799) AND 320 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 0600 UTC OF THE 15<sup>TH</sup> 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.

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
14.09.24/1200	22.4/88.3	50-60 GUSTING TO 70	DEEP DEPRESSION
15.09.24/0000	22.4/87.9	50-60 GUSTING TO 70	DEEP DEPRESSION
15.09.24/1200	22.5/87.2	45-55 GUSTING TO 65	DEPRESSION
16.09.24/0000	22.6/86.1	40-50 GUSTING TO 60	DEPRESSION
16.09.24/1200	22.7/84.8	35-45 GUSTING TO 55	DEPRESSION

AT 1200 UTC, AS PER INSAT 3DR IMAGERY, ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BIHAR, EAST JHARKHAND, SOUTH GANGETIC WEST BENGAL, NORTH

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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ODISHA, TRIPURA MIZORAM, BANGLADESH, NORTH & ADJOINING CENTRAL BAY OF BENGAL (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80-93<sup>0</sup>C) AND MODERATE TO INTENSE CONVECTION LAY OVER SOUTH CHHATTISGARH, SOUTH ODISHA, NORTH GANGETIC WEST BENAGL AND SUB-HIMALAYAN WEST BENGAL.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 989HPA.

AT 1200 UTC, CANNING REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 989.5 HPA. KOLKATA REPORTED MSLP OF 991.3 HPA, 24 HOUR PRESSURE CHANGE (P24) OF -6.7 HPA AND MAXIMUM WIND SPEED (MSW) OF 320°/05KT. DIAMOND HARBOUR REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 991.6 HPA, P24 OF -6.2 HPA AND MSW OF 320°/04KT. SAGAR ISLAND REPORTED MSLP OF 993.9 HPA AND MSW OF 320°/17KT.

#### **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 0600 UTC OF 15<sup>TH</sup> SEPTEMBER. IT IS LIKELY TO BECOME 40-50 KMPH GUSTING TO 60 KMPH TILL 0000 UTC OF 16<sup>TH</sup> SEPTEMBER AND DECREASE THEREAFTER.

SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH LIKELY OVER GANGETIC WEST BENGAL (INCLUDING KOLKATA) AND ADJOINING NORTH ODISHA & JHARKHAND FROM 1500 UTC OF 14<sup>TH</sup> TILL 0000 UTC OF 15<sup>TH</sup> SEPTEMBER.

#### **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 0600 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 THEREAFTER.

#### **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 NORTH BAY WITH STRONG EASTERLY WINDS (5-7 MPS) OVER

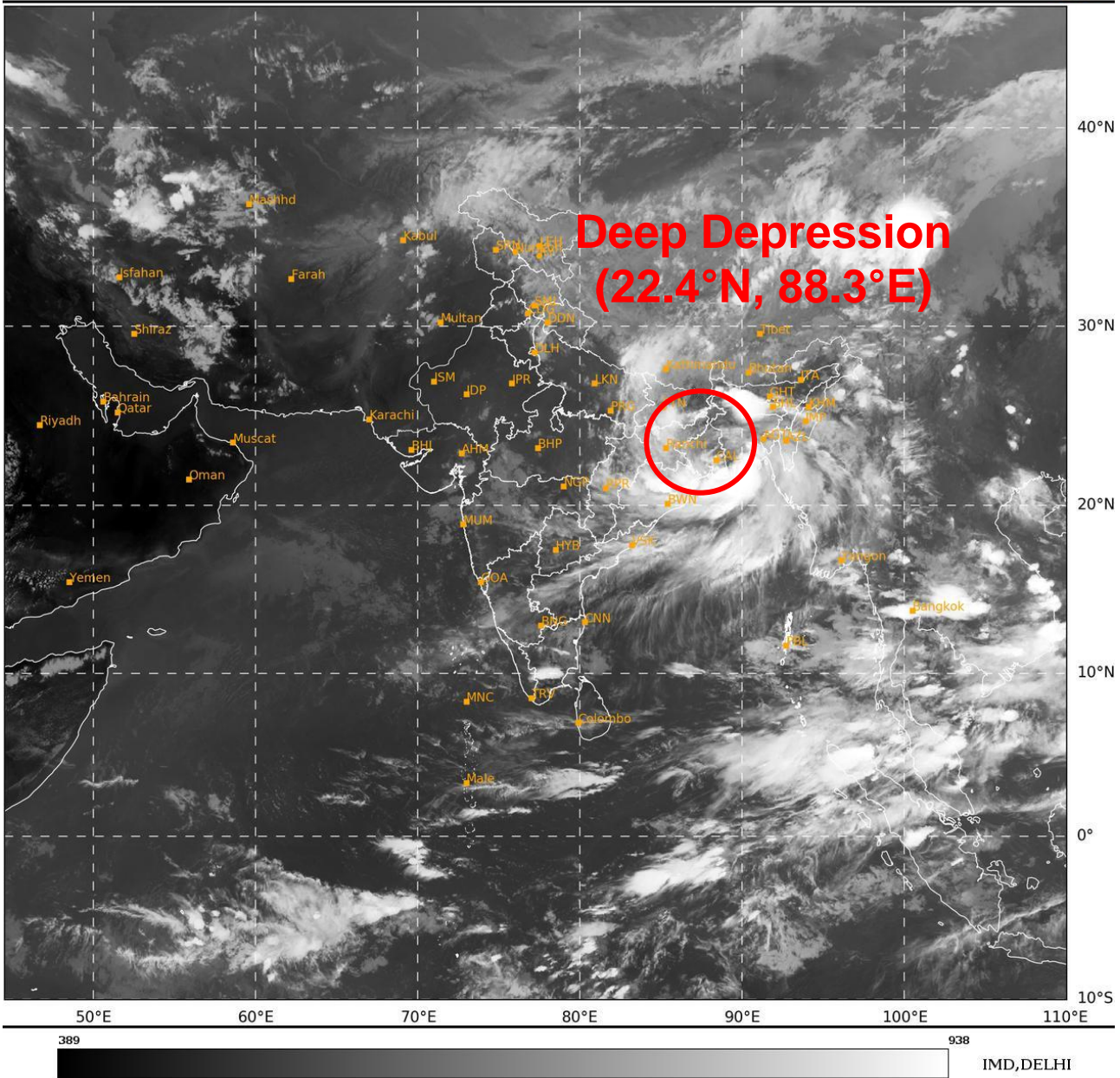
EASTERN PARTS OF INDIA, PRESENCE OF EQUATORIAL ROSSBY WAVES, KELVIN WAVES AND MJ WAVES. ALL THESE FEATURES ARE SUPPORTING THE SYSTEM TO MAINTAIN ITS INTENSITY.

THE LOW LEVEL CONVERGENCE IS AROUND  $10 \times 10^{-5} \text{ S}^{-1}$  AND IS NORTHEAST-SOUTHWEST 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 DEPRESSION DURING NEXT 12 HOURS. ECMWF MODEL IS INDICATING WEAKENING OF THE SYSTEM AROUND 0000 UTC OF 16<sup>TH</sup> SEPTEMBER. HOWEVER, IT IS INDICATING REINTENSIFICATION OF SYSTEM INTO A DEEP DEPRESSION ON 17<sup>TH</sup> SEPTEMBER. GFS IS INDICATING WEAKENING OF THE SYSTEM ON 16<sup>TH</sup> INTO A DEPRESSION. THEREAFTER, IT IS INDICATING FURTHER WEAKENING. THERE IS LARGE DIVERGENCE AMONG VARIOUS MODELS WRT INTENSITY AND MOVEMENT OF SYSTEM.

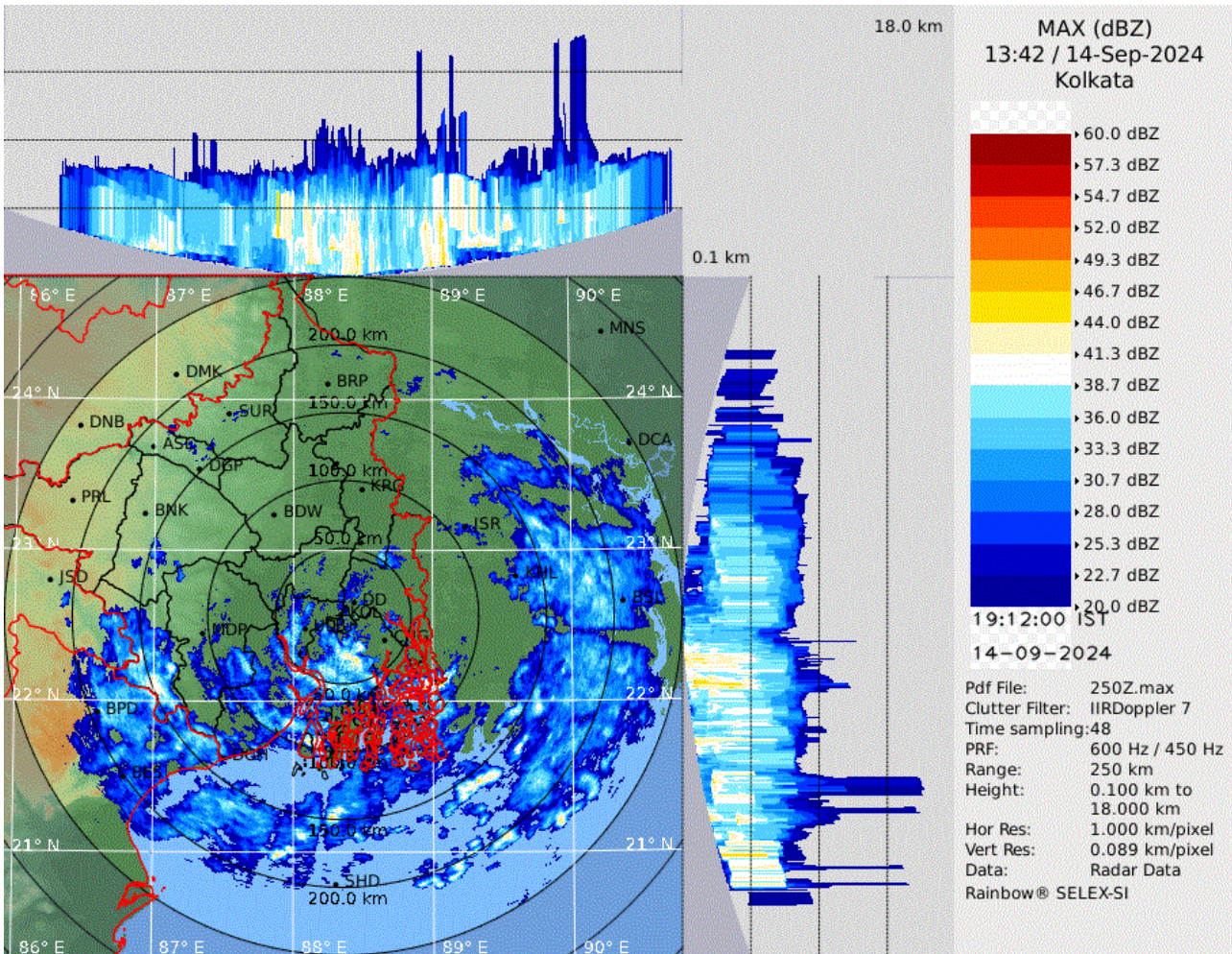
IN VIEW OF ALL THE ABOVE, THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL IS LIKELY TO MOVE SLOWLY, NEARLY WESTWARDS ACROSS GANGETIC WEST BENGAL AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION TILL 0600 UTC OF THE 15<sup>TH</sup> SEPTEMBER. THEREAFTER, IT WILL CONTINUE TO MOVE SLOWLY NEARLY WESTWARDS ACROSS JHARKHAND AND NORTH CHHATTISGARH AND WEAKEN GRADUALLY INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

MONICA SHARMA  
SC.-D, RSMC NEW DELHI



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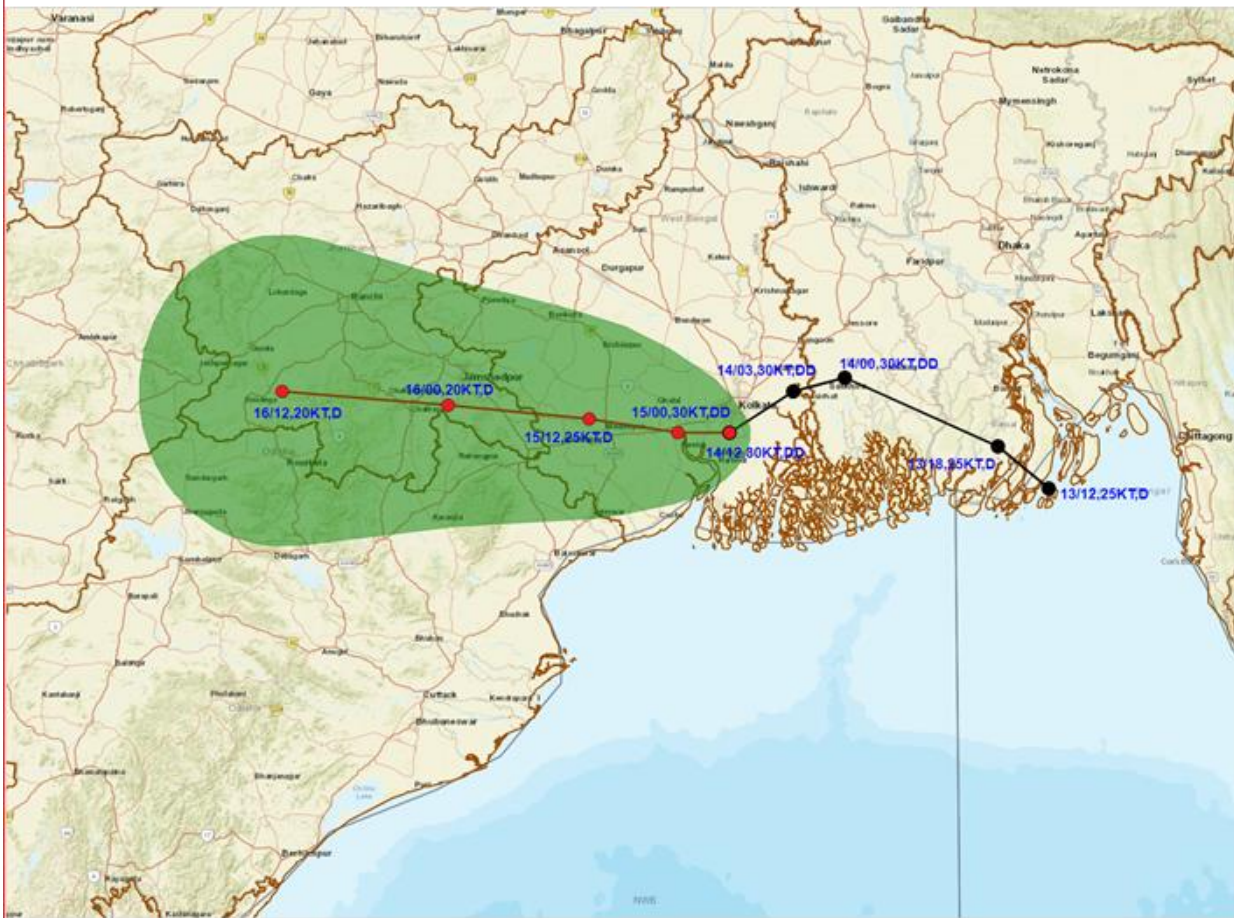
## Kolkata Radar Image



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**OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 1200 UTC (1730 IST) OF 14<sup>TH</sup> SEPTEMBER, 2024.**

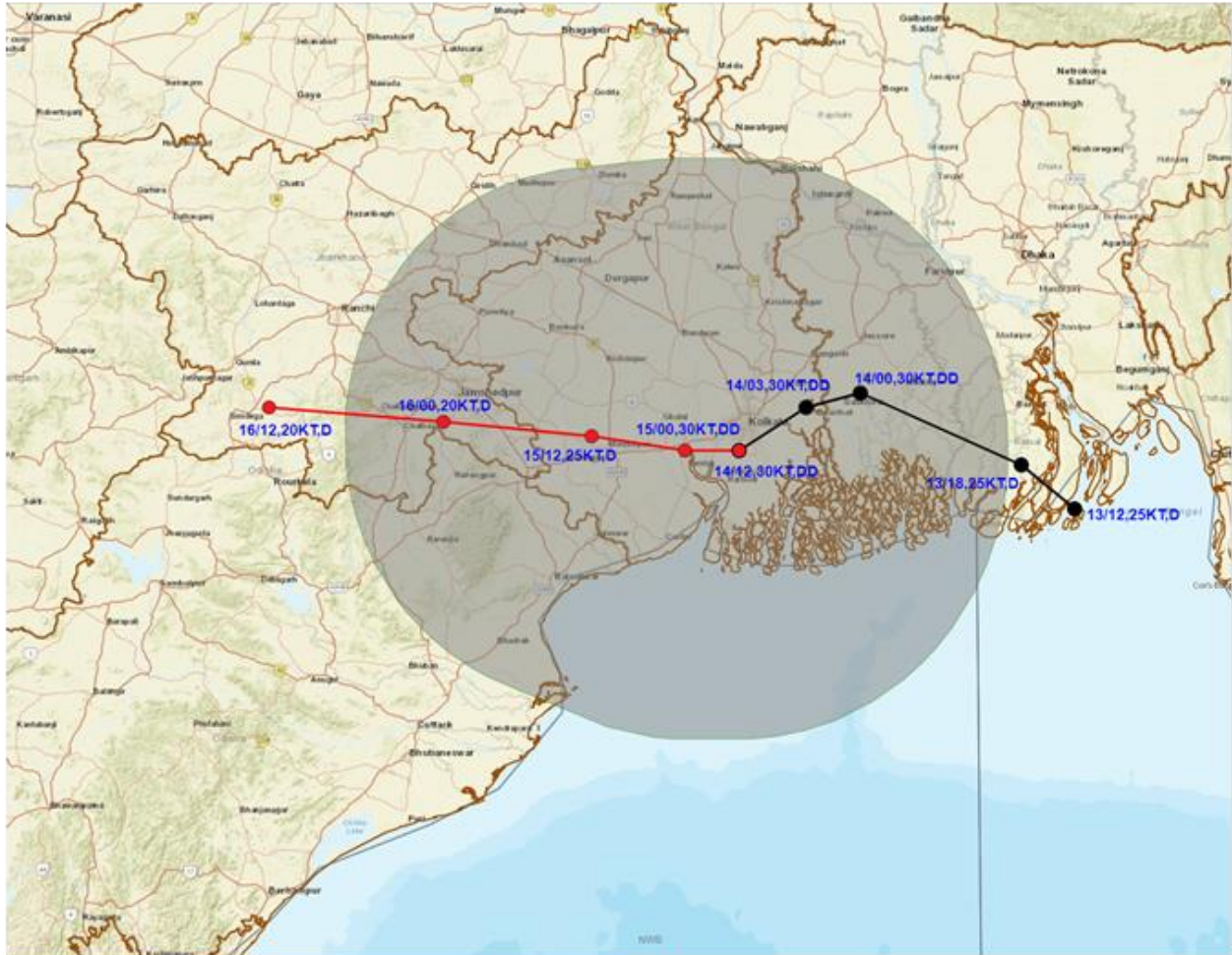


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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



**OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION GANGETIC WEST BENGAL BASED ON 1200 UTC (1730 IST) OF 14<sup>TH</sup> SEPTEMBER, 2024**



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 WML: WELL MARKED LOW PRESSURE AREA  
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 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
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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

