



**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 0930 UTC OF 15.09.2024 BASED ON 0600 UTC OF 15.09.2024.

SUB: DEEP DEPRESSION OVER GANGETIC WEST BENGAL

THE DEEP DEPRESSION OVER GANGETIC WEST BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 8 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 15TH SEPTEMBER 2024, OVER THE SAME REGION NEAR LATITUDE 22.7° N AND LONGITUDE 87.5° E, ABOUT 90 KM WEST-NORTHWEST OF KOLKATA (42807), 90 KM SOUTH-SOUTHEAST OF BANKURA (42706), 140 KM EAST OF JAMSHEDPUR (42799) AND 230 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 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
15.09.24/0600	22.7/87.5	50-60 GUSTING TO 70	DEEP DEPRESSION
15.09.24/1800	22.9/86.8	50-60 GUSTING TO 70	DEEP DEPRESSION
16.09.24/0600	23.1/85.8	40-50 GUSTING TO 60	DEPRESSION
16.09.24/1800	23.3/84.1	35-45 GUSTING TO 55	DEPRESSION
17.09.24/0600	23.6/82.4	25-35 GUSTING TO 45	WELL MARKED LOW PRESSURE AREA

AT 0600 UTC, AS PER INSAT 3DR IMAGERY, SPIRAL BAND ORGANISATION OF CLOUDS CONTINUES. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH CHHATTISGARH, NORTH ODISHA, SOUTH GANGETIC WEST BENGAL, TRIPURA, BANGLADESH AND NORTH BAY OF BENGAL (MINIMUM CLOUD TOP

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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TEMPERATURE MINUS 80-93 DEG CEL). MODERATE TO INTENSE CONVECTION LAY OVER SOUTHEAST UTTAR PRADESH, SOUTHWEST BIHAR, JHARKHAND, SOUTH ODISHA, NORTH GANGETIC WEST BENGAL, SUB-HIMALAYAN WEST BENAGL, MEGHALAYA, ASSAM, MANIPUR, MIZORAM AND TRIPURA (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 60-70 DEG CEL). TOTAL PRECIPITABLE WATER IMAGERY IS INDICATING WARM MOIST AIR ADVECTION FROM NORTH BAY OF BENGAL INTO THE SYSTEM AREA. THE INFRARED-WATER VAPOUR (IR-WV) IMAGERY IS INDICATING (-NEGATIVE OVER SYSTEM AREA) THE DEEP CONVECTION OVER THE REGION. IR-WV IMAGERY IS INDICATING MESOSCALE CONVECTIVE CLUSTERS OVER BANGLADESH, AROUND SYSTEM AREA AND OVER JHARKHAND.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 992HPA.

AT 0600 UTC, KOLKATA REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 992.3 HPA WITH MAXIMUM WIND SPEED (MSW) OF 160°/05KT. DIAMOND HARBOUR REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 992.6 HPA AND MAXIMUM WIND SPEED (MSW) OF 160°/04KT. BANKURA REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 992.6 HPA AND MAXIMUM WIND SPEED (MSW) OF 50°/03KT.

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 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. WARM SEA SURFACE TEMPERATURE OVER HEAD BAY OF BENGAL IS CAUSING WARM MOIST AIR ADVECTION TOWARDS THE SYSTEM CENTRE.

THE LOW LEVEL CONVERGENCE IS AROUND $10 \times 10^{-5} \text{ S}^{-1}$ AND IS ELONGATED AROUND SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ ORIENTED IN THE NORTHEAST-SOUTHWEST DIRECTION. THE WIND SHEAR IS LOW TO MODERATE (10-15 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND $250 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE AND EXTENDS UP TO 200 HPA ($50 \times 10^{-5} \text{ S}^{-1}$). THESE FEATURES INDICATE THAT THE SYSTEM IS STILL LYING IN A FAVOURABLE ENVIRONMENT. SYSTEM IS EMBEDDED IN SOUTHWEST MONSOON WESTERLIES. DEEP LAYER MEAN WIND SUGGEST WEST-NORTHWESTWARD MOVEMENT UPTO 80°E . APPROACHING TROUGH IN WESTERLY WILL SLOW DOWN THE SYSTEM AND MAY LEAD TO NEAR NORTHWESTWARDS MOVEMENT OF SYSTEM ACROSS UTTAR PRADESH.

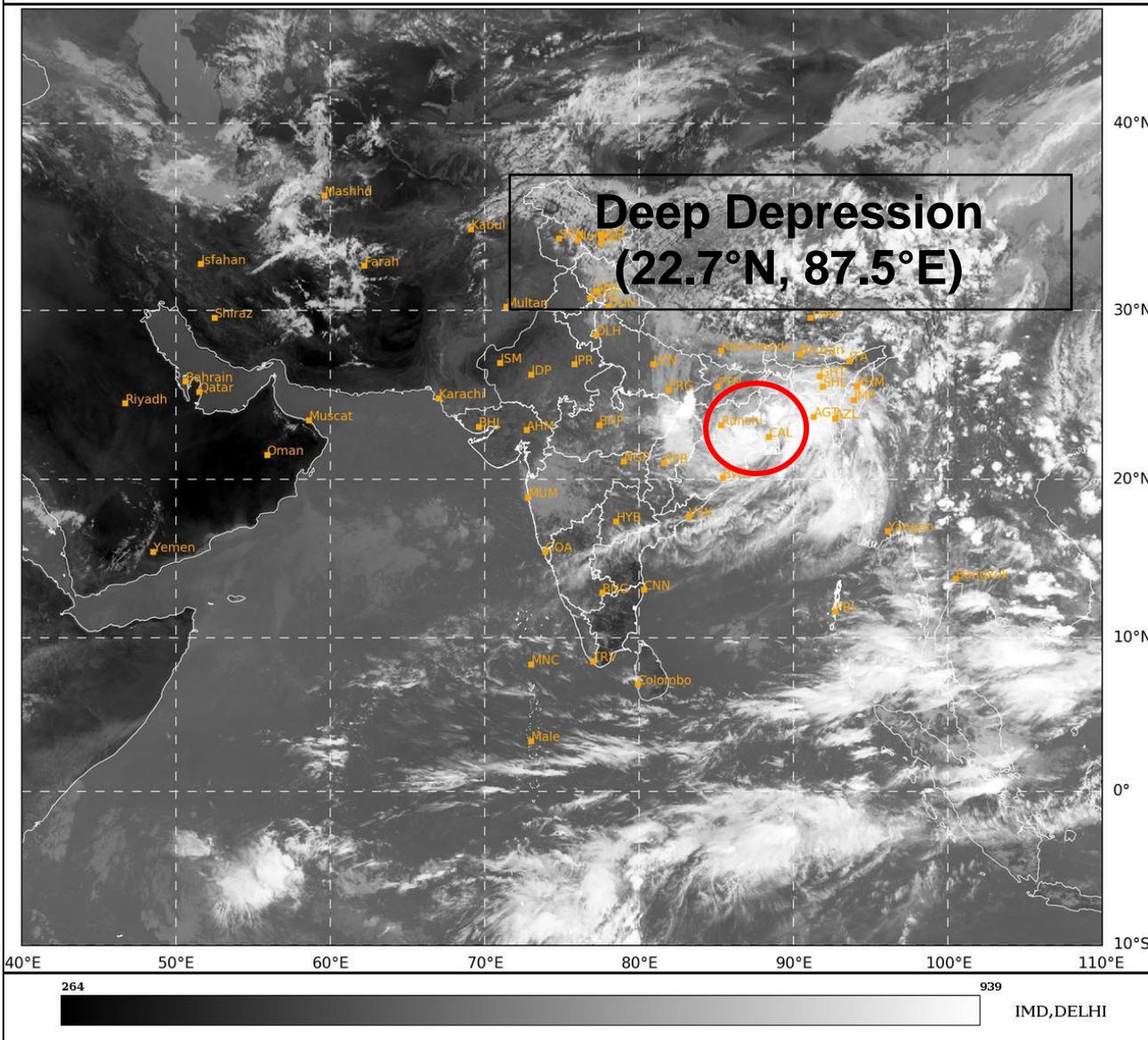
MOST OF THE NWP MODELS INDICATE THAT THE SYSTEM IS LIKELY TO MOVE SLOWLY NEARLY WESTWARDS AND MAINTAIN ITS INTENSITY OF DEEP DEPRESSION DURING NEXT 12 HOURS. MOST OF THE MODELS ARE INDICATING WEAKENING OF THE SYSTEM ON 16TH SEPTEMBER (BETWEEN 0000 TO 1200 UTC). IMD MME IS INDICATING GRADUAL WEAKENING INTO A DEPRESSION AT 0000 UTC OF 16TH SEPTEMBER. IT IS INDICATING INITIAL WESTWARDS MOVEMENT TILL 17TH/0000 UTC FOLLOWED BY NORTHWESTWARDS MOVEMENT THEREAFTER.

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 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.

MONICA SHARMA
SC.-D, RSMC NEW DELHI

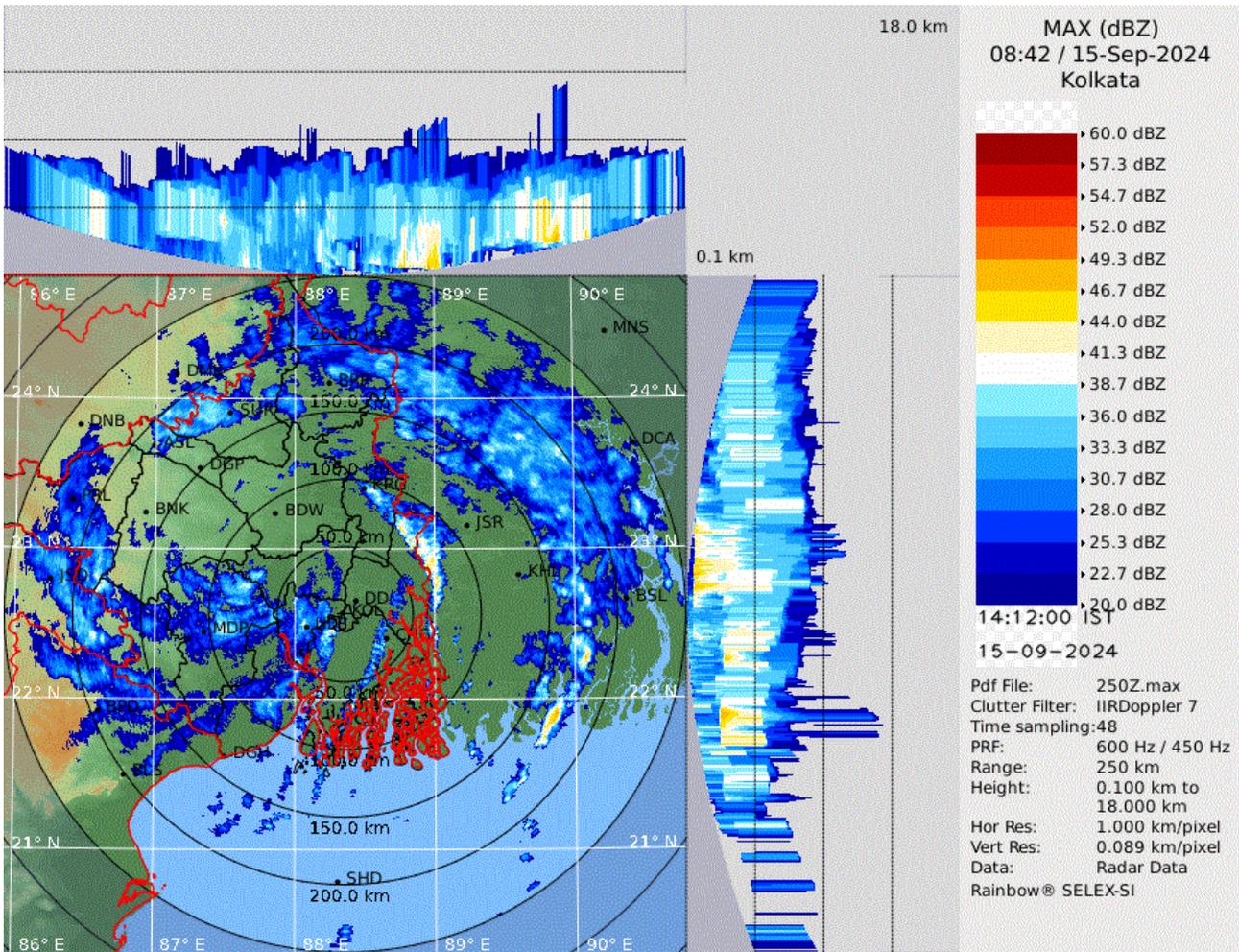
SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
LIC Mercator

15-09-2024/(0745 to 0812) GMT
15-09-2024/(1315 to 1342) IST



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Kolkata Radar Image



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OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER GANGETIC WEST BENGAL BASED ON 0600 UTC (1130 IST) OF 15TH SEPTEMBER, 2024.



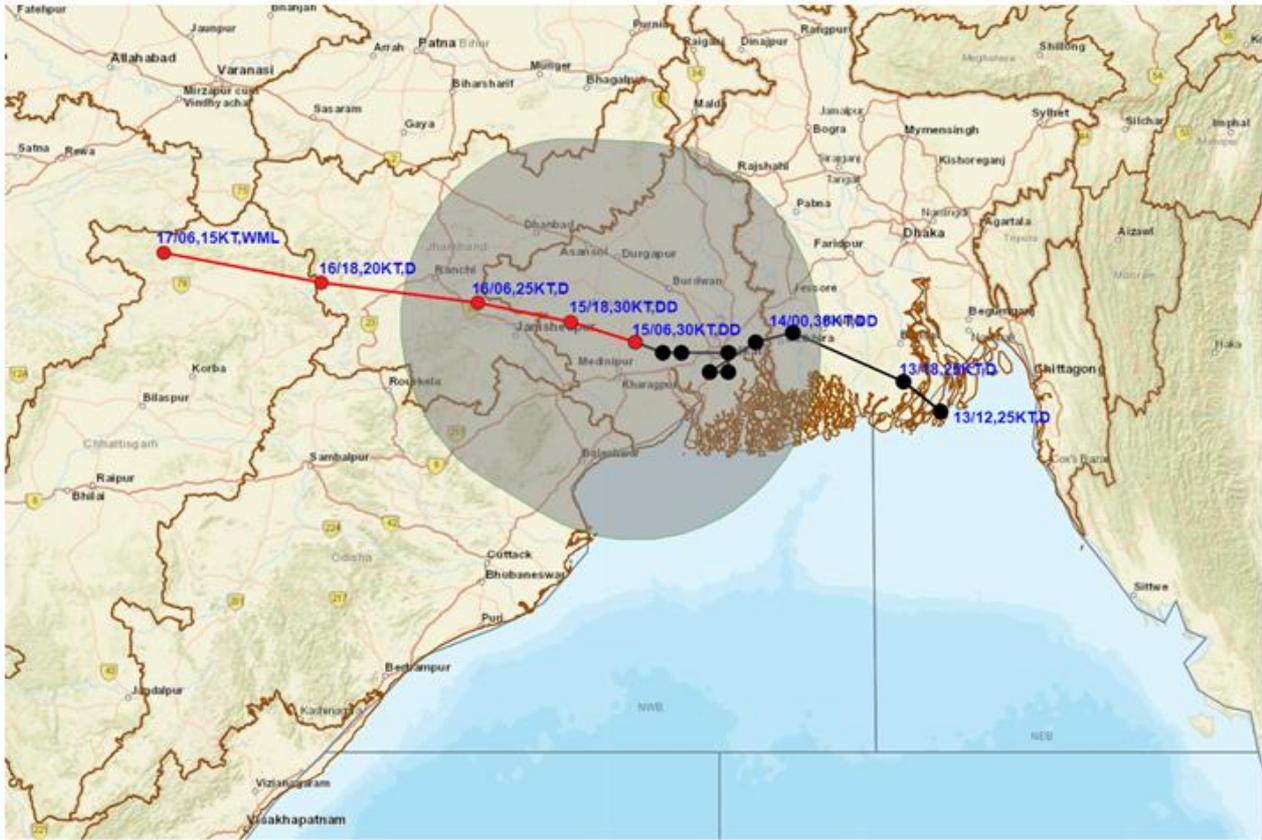
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (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 0600 UTC (1130 IST) OF 15TH SEPTEMBER, 2024



DATE/TIME IN UTC
IST=UTC + 0530

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D: DEPRESSION (17-27 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

