



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 09.09.2024**

**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 09.09.2024 BASED ON 0600 UTC OF 09.09.2024.**

**SUB: DEEP DEPRESSION CROSSED ODISHA COAST NEAR PURI BETWEEN 0500-0600 UTC OF TODAY, THE 9<sup>TH</sup> SEPTEMBER**

THE DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 6 HOURS, CROSSED ODISHA COAST CLOSE TO PURI NEAR 19.85N/86.0E BETWEEN 0500-0600 UTC AND LAY CENTERED AT 0600 UTC OF TODAY, THE 9TH SEPTEMBER, 2024 OVER COASTAL ODISHA NEAR LATITUDE 20.0°N AND LONGITUDE 86.0°E, ABOUT 30 KM NORTHEAST OF PURI (43053), 30 KM SOUTH-SOUTHEAST OF BHUBANESWAR (42971) AND 270 KM SOUTHEAST OF SAMBALPUR (42883).

IT IS VERY LIKELY TO MOVE FURTHER NORTHWESTWARDS ACROSS INTERIOR ODISHA MAINTAINING ITS INTENSITY OF DEEP DEPRESSION TILL 1200 UTC AND WEAKEN GRADUALLY INTO A DEPRESSION BY 1800 UTC OF TODAY, THE 9<sup>TH</sup> SEPTEMBER. THEREAFTER, IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS NORTH CHHATTISGARH DURING SUBSEQUENT 24 HOURS AS A DEPRESSION.

THE SYSTEM IS UNDER THE CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADARS AT GOPALPUR.

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
09.09.24/0600	20.0/86.0	55-65 gusting to 75	Deep Depression
09.09.24/1200	20.6/85.4	50-60 gusting to 70	Deep Depression
09.09.24/1800	21.2/84.6	45-55 gusting to 65	Depression
10.09.24/0000	21.6/83.7	40-50 gusting to 60	Depression
10.09.24/0600	21.9/82.6	35-45 gusting to 55	Depression

AS PER INSAT 3DR IMAGERY AT 0600 UTC, ASSOCIATED SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH ODISHA, SOUTH CHHATTISGARH, VIDHARBHA AND TELANGANA WITH MINIMUM CLOUD TOP TEMPERATURE OF -90°C AND MODERATE TO INTENSE CONVECTION OVER RAYALASEEMA, NORTH COASTAL ANDHRA PRADESH, NORTH EAST NORTH INTERIOR KARNATAKA AND MARATHWADA.

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

AT 0600 UTC, PURI REPORTED MSLP OF 993.7 HPA, AND PRESSURE CHANGE IN 24 HOURS AS -5.5 HPA. BHUBANESWAR REPORTED MSLP OF 993.0 HPA, PRESSURE CHANGE IN 24 HOURS AS -8.1 HPA. SAMBALPUR REPORTED MSLP OF 997.1 HPA, PRESSURE CHANGE IN 24 HOURS AS -4.6 HPA.

### **WIND WARNING**

SQUALLY WEATHER WITH WIND SPEED REACHING 55-65 KMPH GUSTING TO 75 KMPH IS PREVAILING OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL COASTS AND IS LIKELY TO CONTINUE NEXT 3 HOURS. IT IS LIKELY TO DECREASE, GRADUALLY BECOMING 45-55 KMPH GUSTING TO 65 KMPH BY 1200 OF 9<sup>TH</sup> SEPTEMBER. IT WILL DECREASE GRADUALLY THEREAFTER.

### **SEA CONDITION**

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY OVER NORTHWEST AND ADJOINING NORTHEAST & CENTRAL BAY OF BENGAL AND ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL COASTS TILL 1200 UTC OF THE 9<sup>TH</sup> SEPTEMBER AND ROUGH SEA CONDITION ON 10<sup>TH</sup> SEPTEMBER. IT IS LIKELY TO IMPROVE GRADUALLY THEREAFTER.

### **FISHERMEN WARNING**

ROUGH TO VERY ROUGH SEA CONDITION OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL AND ALONG & OFF ANDHRA PRADESH-ODISHA-WEST BENGAL COASTS TILL 1200 UTC OF 9<sup>TH</sup> AND ROUGH SEA CONDITION ON 10<sup>TH</sup> SEPTEMBER. IT IS LIKELY TO IMPROVE GRADUALLY THEREAFTER.

### **REMARKS:**

CURRENT ENVIRONMENTAL CONDITIONS INDICATE THAT THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL (BOB) IS LYING IN A FAVOURABLE ENVIRONMENT. SEA SURFACE TEMPERATURE IS 29-30°C OVER WESTCENTRAL & ADJOINING EASTCENTRAL BOB. IT IS HIGHER AROUND 32°C OVER NORTHWEST BOB OFF ODISHA COAST. TROPICAL CYCLONE HEAT POTENTIAL IS 60-80KJ/CM<sup>2</sup> NEAR SYSTEM LOCATION. IT IS SLIGHTLY HIGHER OVER NORTHWEST BOB (100 KJ/CM<sup>2</sup>). THUS, DURING ITS NORTH-NORTHWESTWARDS MOVEMENT, IT WILL ENTER INTO WARM OCEANIC AREA.

MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE LESS THAN 1. IT IS LIKELY TO CONTINUE IN SAME PHASE DURING NEXT 4 DAYS. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER NORTH BOB. NCICS BASED GUIDANCE ON EQUATORIAL WAVES INDICATE, STRONG WESTERLY WINDS (5-7 MPS) ALONGWITH ROSSBY WAVES OVER SOUTH BOB AND STRONG EASTERLY WINDS (5-7MPS) OVER NORTH BOB.

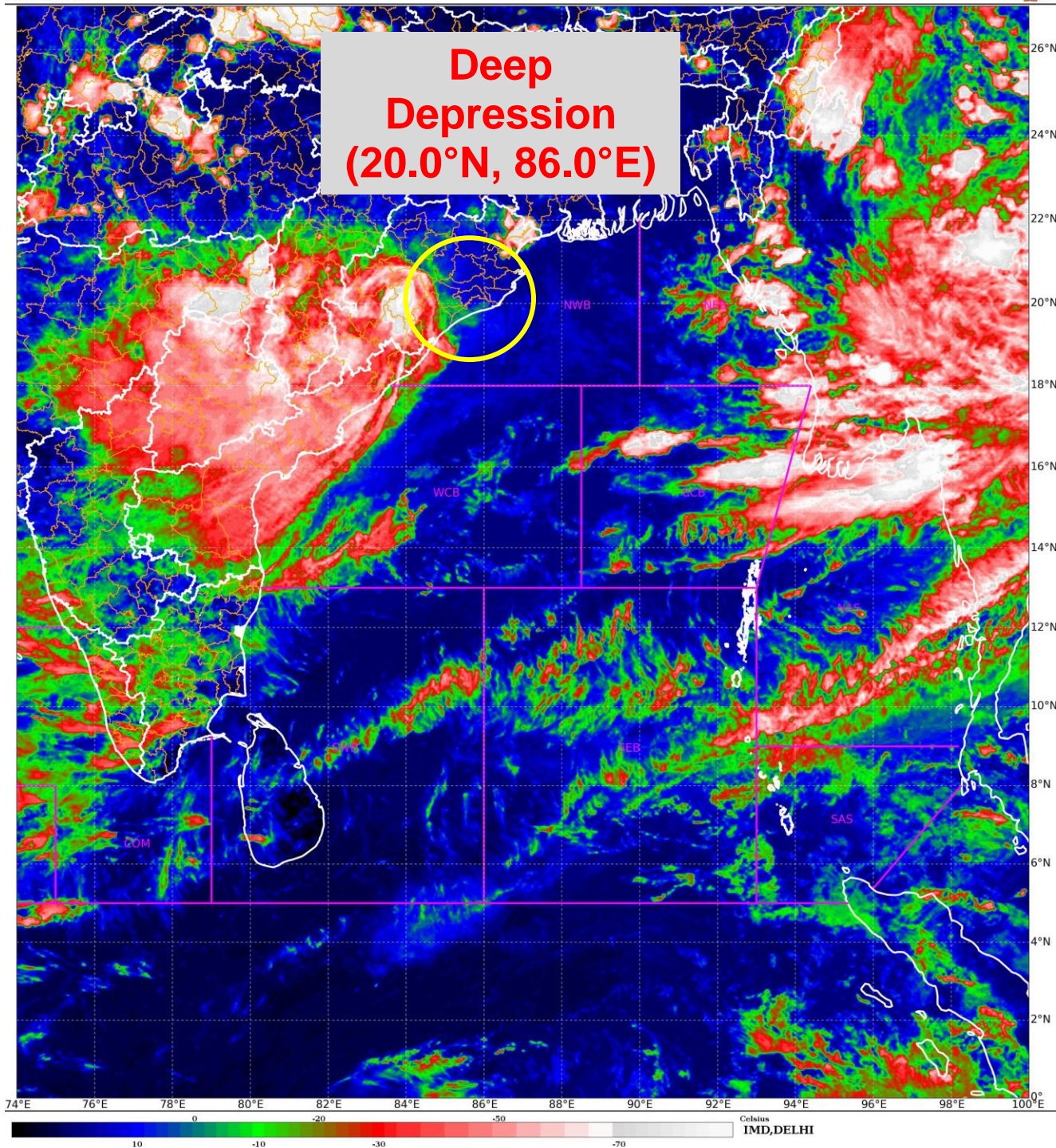
THE LOW LEVEL CONVERGENCE IS AROUND  $15 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST AND ANOTHER ZONE OF  $5 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF SYSTEM CENTRE. THE WIND SHEAR IS LOW (05-10 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND  $150 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF SYSTEM AREA WITH EXTENSION UPTO 500 HPA LEVEL.

THERE IS CONSENSUS AMONG ALL MODELS REGARDING WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM AFTER LANDFALL ACROSS ODISHA AND CHHATTISGARH.

CONSIDERING ALL THE ABOVE, IT IS CONCLUDED THAT THE DEEP DEPRESSION OVER COASTAL ODISHA IS VERY LIKELY TO MOVE FURTHER NORTHWESTWARDS ACROSS INTERIOR ODISHA MAINTAINING ITS INTENSITY OF DEEP DEPRESSION TILL 1200 UTC AND WEAKEN GRADUALLY INTO A DEPRESSION BY 1800 UTC OF TODAY, THE 9<sup>TH</sup> SEPTEMBER. THEREAFTER, IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS NORTH CHHATTISGARH DURING SUBSEQUENT 24 HOURS AS A DEPRESSION.

(MONICA SHARMA)  
RSMC NEW DELHI





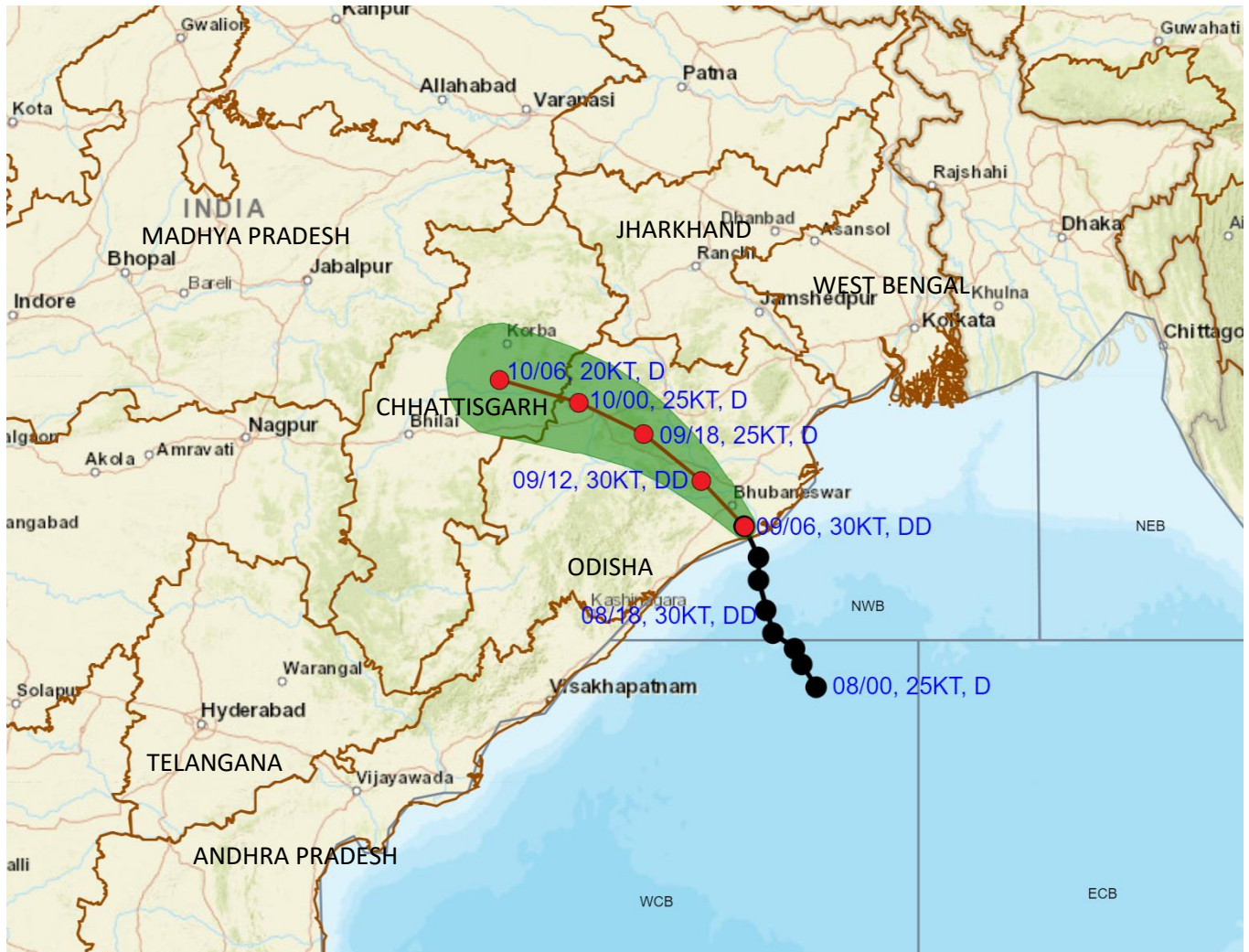
Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C  
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%  
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## OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 9th SEPTEMBER, 2024.



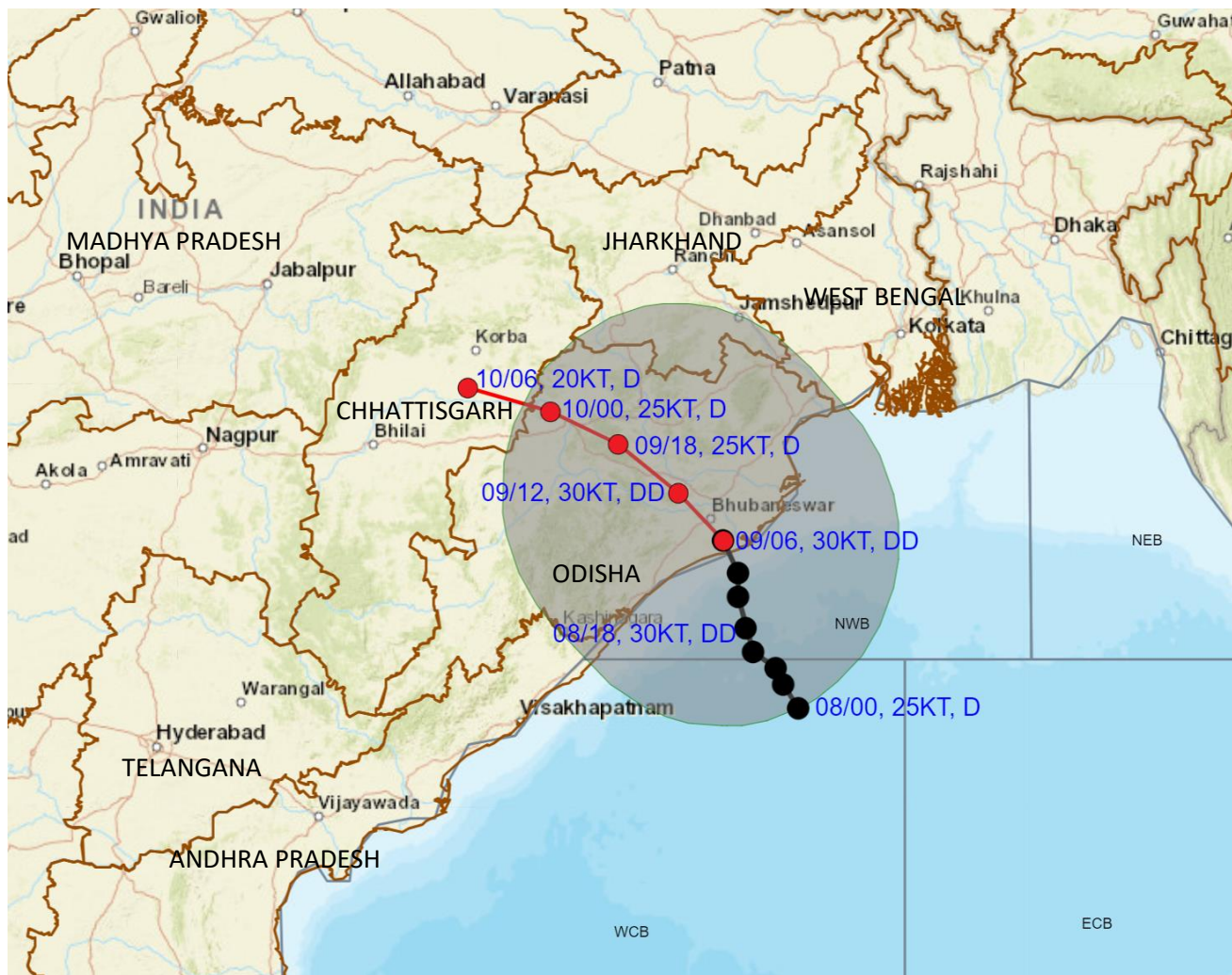
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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

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  
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## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 9th 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)

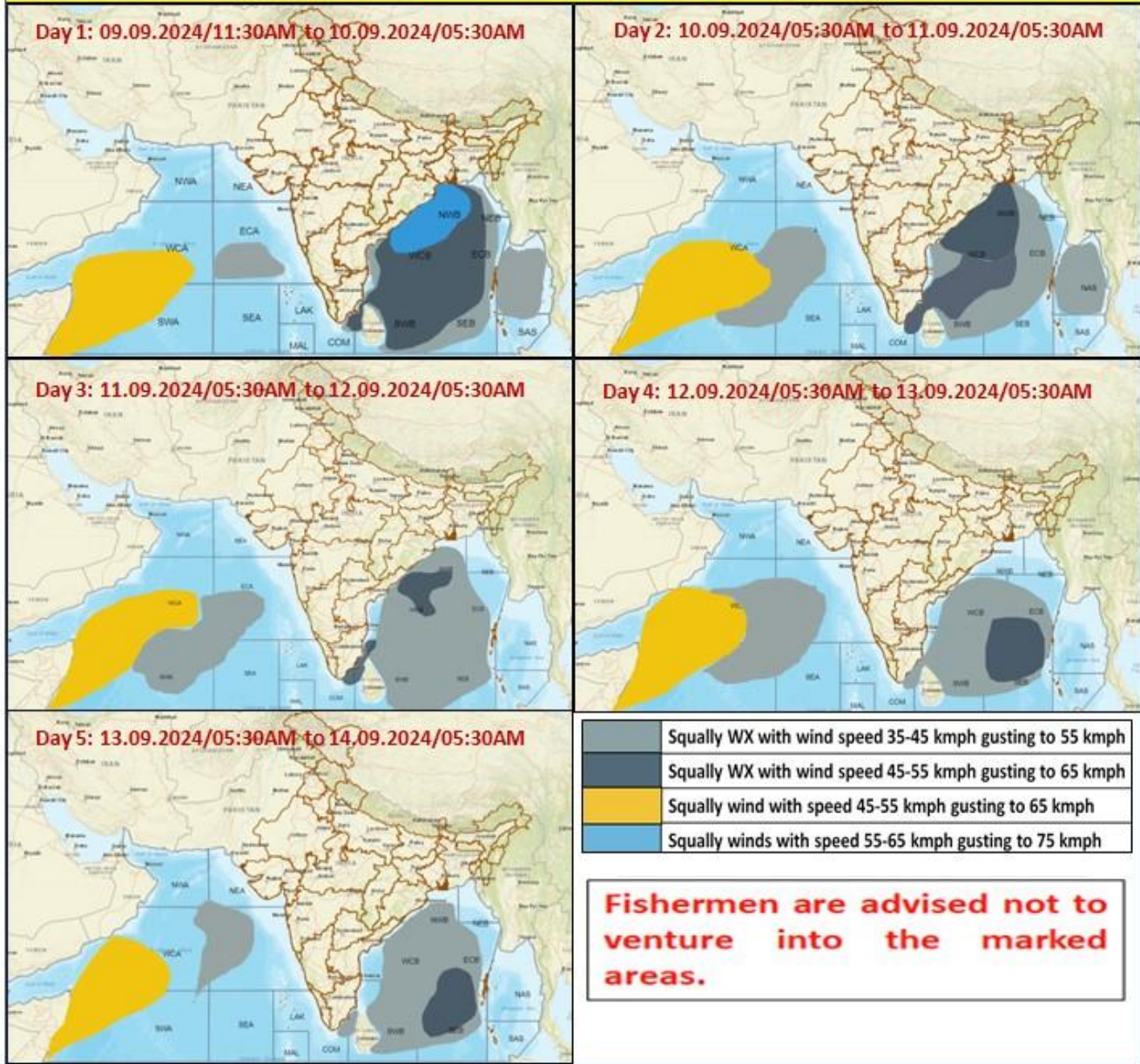
### IMPACT OVER THE SEA

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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### Fishermen Warning Graphics



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