



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

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 11.09.2024

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 2100 UTC OF 11.09.2024 BASED ON 1800 UTC OF 11.09.2024.**

### **SUB: DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING SOUTHWEST UTTAR PRADESH**

THE DEPRESSION OVER NORTHEAST MADHYA PRADESH AND ADJOINING SOUTH UTTAR PRADESH MOVED NEARLY NORTHWESTWARDS WITH A SPEED OF 33 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1800 UTC OF 11<sup>TH</sup> SEPTEMBER OVER NORTHWEST MADHYA PRADESH AND ADJOINING SOUTHWEST UTTAR PRADESH NEAR LATITUDE 26.3°N AND LONGITUDE 78.2°E, CLOSE TO GWALIOR (42361), ABOUT 100 KM SOUTH OF AGRA (42261), 100 KM NORTH-NORTHWEST OF JHANSI (42463) AND 180 KM SOUTH OF ALIGARH (42262).

IT IS LIKELY TO MOVE SLOWLY NORTH-NORTHWESTWARDS DURING NEXT 24 HRS. THE SYSTEM IS UNDER CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADARS AT DELHI AND LUCKNOW.

AS PER INSAT 3DR IMAGERY AT 1800 UTC, ASSOCIATED SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER UTTAR PRADESH, EAST RAJASTHAN, MADHYA PRADESH, UTTAR PRADESH AND ADJOINING AREAS WITH MINIMUM CLOUD TOP TEMPERATURE OF -93°C.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 20 KTS GUSTING TO 30 KTS. ESTIMATED CENTRAL PRESSURE IS 994 HPA.

#### **REMARKS:**

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 2-3 DAYS. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER EAST & CENTRAL INDIA. NCICS BASED GUIDANCE ON EQUATORIAL WAVES INDICATE, STRONG WESTERLY WINDS (5-7 MPS) ALONGWITH ROSSBY WAVES OVER CENTRAL PARTS OF INDIA AND STRONG EASTERLY WINDS (5-7MPS) OVER NORTHERN PARTS OF INDIA DURING NEXT 3-4 DAYS.

THE LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$ ; UPPER LEVEL DIVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  OVER SYSTEM AREA. THE WIND SHEAR IS MODERATE (10-15 KT)

OVER SYSTEM AREA AND HIGH (>20) TO THE NORTH OF SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND  $250 \times 10^{-5} \text{ S}^{-1}$  OVER SYSTEM AREA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. MID LEVEL SHEAR IS CYCLONIC OVER SYSTEM AREA. CURRENT ENVIRONMENTAL CONDITIONS INDICATE THAT THE DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING SOUTHWEST UTTAR PRADESH IS LYING IN A MODERATELY FAVOURABLE ENVIRONMENT

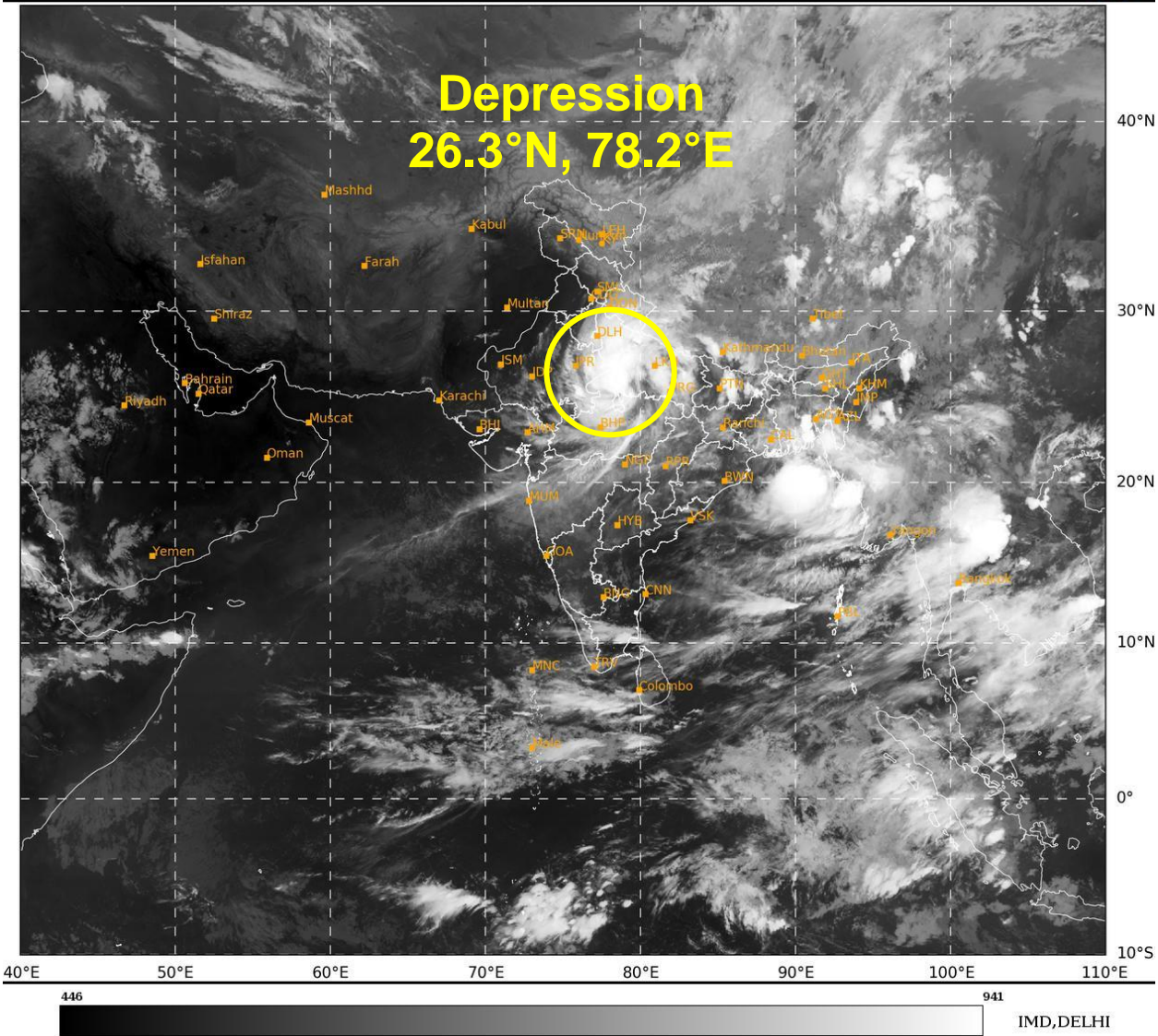
MOST OF THE MODELS ARE INDICATING THAT THE SYSTEM WILL MOVE SLOWLY NORTH-NORTHWESTWARDS INITIALLY AND THEREAFTER, IT IS LIKELY TO RECURVE NORTH-NORTHEASTWARDS UNDER THE INFLUENCE OF APPROACHING WESTERLY TROUGH AT 400 HPA LEVEL. IT WOULD ALSO INHIBIT ITS FURTHER NORTHWESTWARDS MOVEMENT. MOST OF THE MODELS ARE INDICATING WEAKENING OF THE SYSTEM AROUND 14<sup>TH</sup> EVENING

IN VIEW OF ALL THE ABOVE, THE SYSTEM IS LIKELY TO MOVE SLOWLY NORTH-NORTHWESTWARDS DURING NEXT 24 HRS.

NEXT UPDATE IN ASSOCIATION WITH THIS SYSTEM WILL BE ISSUED AT 0300 UTC OF TOMORROW, THE 12<sup>TH</sup> SEPTEMBER.

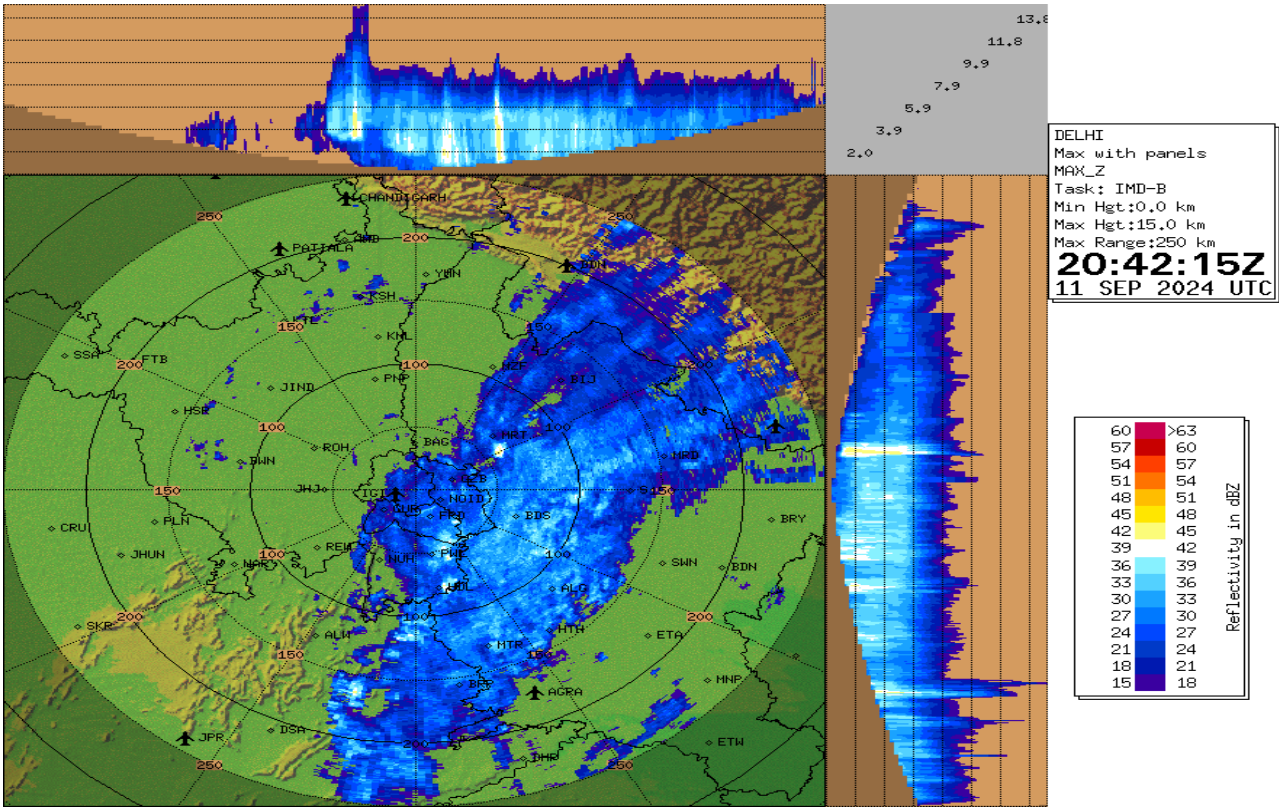
(SHASHI KANT)

SC.-D, RSMC NEW DELHI

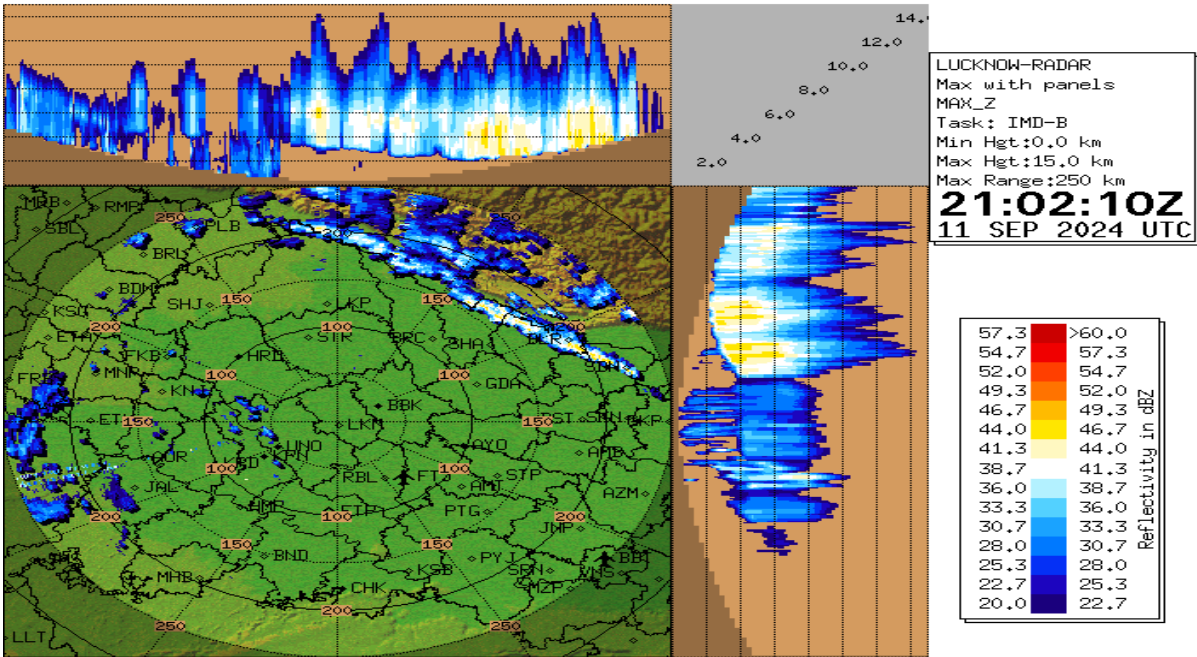


Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C  
PROBABILITY OF CYCLOGENESIS (FORMATION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



### Doppler Weather Radar at Lucknow



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**OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING SOUTHWEST UTTAR PRADESH BASED ON 1800 UTC (2330 IST) OF 11<sup>TH</sup> SEPTEMBER, 2024.**

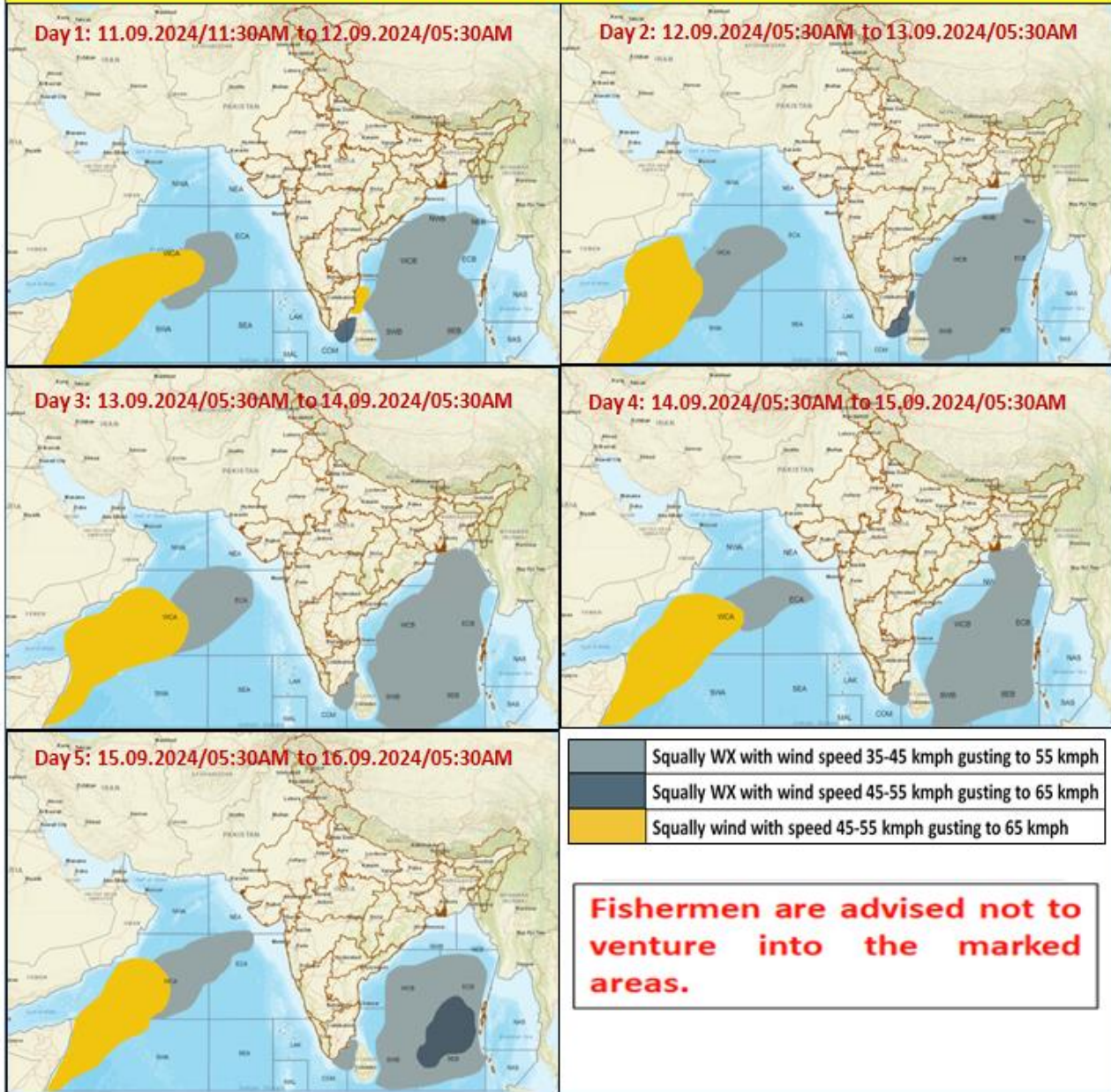


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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



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