



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 17.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0300 UTC OF 17.09.2024 BASED ON 0000 UTC OF 17.09.2024.

DEPRESSION OVER JHARKHAND AND ADJOINING NORTH CHHATTISGARH

THE DEEP DEPRESSION OVER JHARKHAND MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 6 HOURS, WEAKENED INTO A DEPRESSION AND LAY CENTERED AT 0000 UTC OF TODAY, THE 17TH SEPTEMBER 2024, OVER JHARKHAND AND ADJOINING NORTH CHATTISGARH NEAR LATITUDE 23.6° N AND LONGITUDE 84.2° E, AROUND 50 KM SOUTH-SOUTHEAST OF DALTONGANJ (JHARKHAND), ABOUT 120 KM WEST-NORTHWEST OF RANCHI (42701, JHARKHAND), 110 KM EAST-NORTHEAST OF AMBIKAPUR (42693, CHHATTISGARH) AND 160 KM SOUTHEAST OF CHURK (42589, UTTAR PRADESH).

IT IS LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND, NORTH CHHATTISAGRH, SOUTH UTTAR PRADESH & ADJOINING NORTHEAST MADHYA PRADESH AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 24 HOURS.

AT 0000 UTC, AS PER INSAT 3DR IMAGERY, ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BIHAR, SOUTHEAST UTTAR PRADESH, NORTHEAST MADHYA PRADESH, JHARKHAND, NORTH CHHATTISGARH, NORTH ODISHA, GANGETIC WEST BENGAL, NORTH BANGALADESH (MINIMUM CLOUD TOP TEMPERATURE MINUS 70-90 DEG CELSIUS) AND MDERATE TO INTENSE CONVENTION LAY OVER GANGETIC WEST BENGAL & SUBHIMALAYAN WEST BENGAL. (MINIMUM CLOUD TOP TEMPERATURE MINUS 50-70 DEG CELSIUS).

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 25 KTS GUSTING TO 35 KTS. ESTIMATED CENTRAL PRESSURE IS 997HPA.

AT 0000 UTC, DALTONGANJ REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 997.1 HPA, PAST 24 HOUR PRESSURE CHANGE (P24) OF -1.4 HPA, AND MAXIMUM WIND SPEED (MSW) OF 320°/10KT. RANCHI REPORTED MSLP OF 1000.5 HPA, AND MSW OF 140°/10 KT.

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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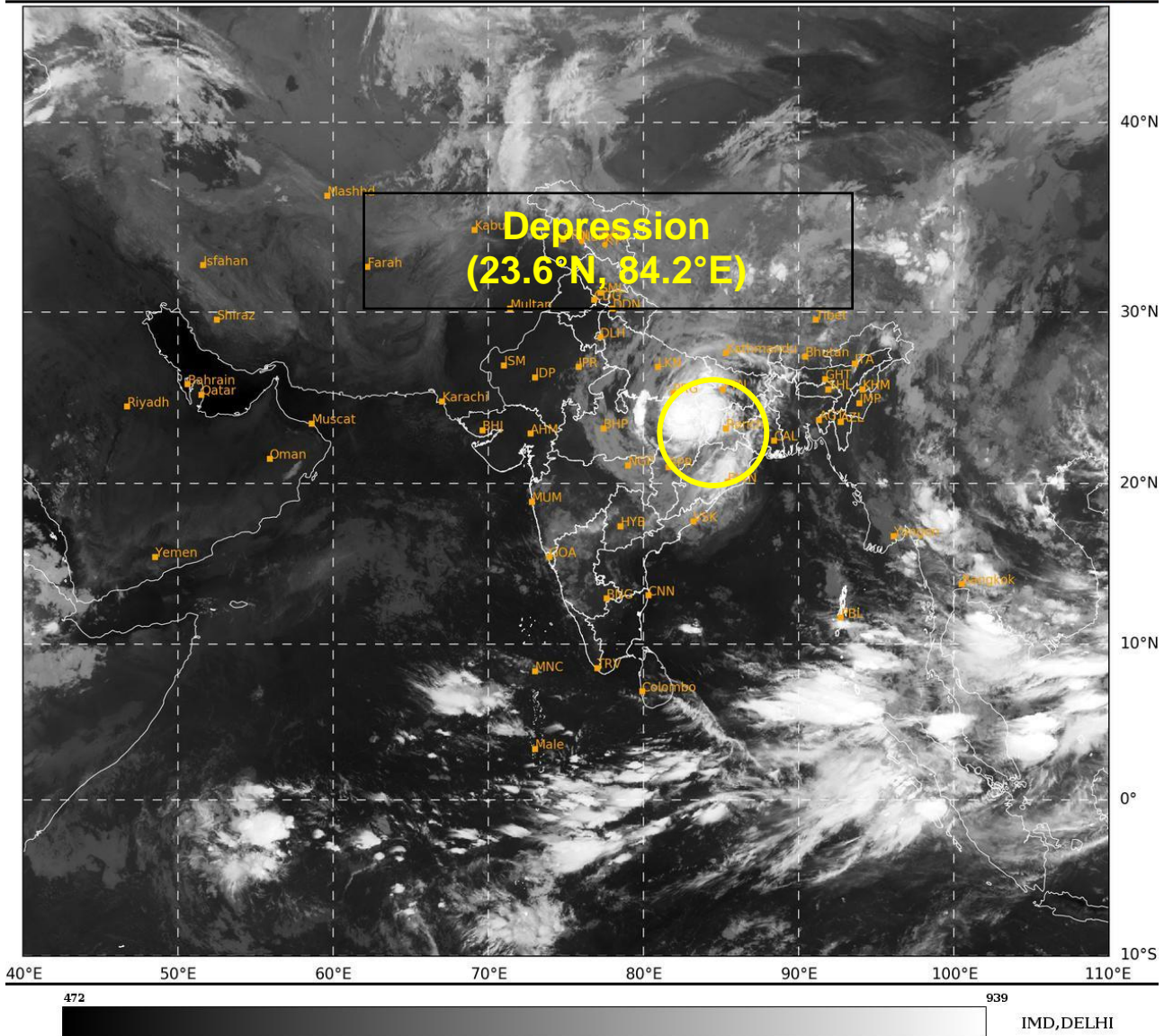
REMARKS:

MADDEN JULIAN OSCILLATION (MJO) INDEX HAS ENTERED PHASE 6 (UNFAVOURABLE). THE NCICS BASED FORECAST INDICATES PERSISTENCE OF WESTERLY WINDS (3-5 MPS) OVER CENTRAL PARTS OF INDIA WITH EASTERLY WINDS (3-5 MPS) OVER NORTHEASTERN PARTS OF INDIA. OTHER EQUATORIAL WAVES HAVE MOVED AWAY. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ OVER SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED AND IS AROUND $30 \times 10^{-5} \text{ S}^{-1}$ OVER SYSTEM AREA. THE WIND SHEAR IS MODERATE (15-20 KT) OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS AROUND $120 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE AND EXTENDS UP TO 500 HPA ($40-50 \times 10^{-5} \text{ S}^{-1}$), INDICATING DECREASE IN DEPTH OF CONVECTION. ENVIRONMENTAL FEATURES ARE INDICATING GRADUAL WEAKENING OF SYSTEM.

IMD MME IS INDICATING GRADUAL WEST-NORTHWESTWARDS MOVEMENT ACROSS NORTH JHARKHAND, NORTH CHHATTISGARH AND NORTHEAST MADHYA PRADESH AND GRADUAL WEAKENING INTO A WELL MARKED LOW PRESSURE AREA AROUND 0000 UTC OF 18TH SEPTEMBER OVER NORTHEAST MADHYA PRADESH.

IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER JHARKHAND AND ADJOINING NORTH CHHATTISGARH IS LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND, NORTH CHHATTISGARH, SOUTH UTTAR PRADESH & ADJOINING NORTHEAST MADHYA PRADESH AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 24 HOURS.

SHIBIN BALAKRISHNAN
SC.-D, RSMC NEW DELHI



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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER JHARKHAND AND ADJOINING NORTH CHHATTISGARH BASED ON 0000 UTC (0530 IST) OF 17TH 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 (≥ 20 KT)

- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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