



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 2100 UTC OF 17.09.2024 BASED ON 1800 UTC OF 17.09.2024.

SUB: DEPRESSION OVER NORTHEAST MADHYA PRADESH

THE DEPRESSION OVER NORTHEAST MADHYA PRADESH MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 17 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC OF 17TH SEPTEMBER 2024, OVER THE SAME REGION NEAR LATITUDE 24.2°N AND LONGITUDE 80.3°E, ABOUT 70 KM SOUTHWEST OF SATNA (42571, MADHYA PRADESH), 100 KM SOUTH-SOUTHEAST OF KHAJURAO (42567, MADHYA PRADESH) AND 160 KM WEST OF SIDHI (42577, MADHYA PRADESH).

IT IS LIKELY TO MOVE NEARLY WEST-NORTHWESTWARDS ACROSS NORTH MADHYA PRADESH & ADJOINING SOUTHWEST UTTAR PRADESH AND WEAKEN INTO A WELL-MARKED LOW PRESSURE AREA DURING NEXT 24 HOURS.

AT 1800 UTC, AS PER INSAT 3DR IMAGERY, ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH MADHYA PRADESH, UTTAR PRADESH, WEST NEPAL, (MINIMUM CLOUD TOP TEMPERATURE MINUS 70-93 DEG CELSIUS) AND MODERATE TO INTENSE CONVECTION OVER UTTARAKHAND, EAST HARYANA, NORTHEAST RAJASTHAN, SOUTH MADHYA PRADESH (MINIMUM CLOUD TOP TEMPERATURE MINUS 40-60 DEG CELSIUS).

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 20 KT GUSTING TO 30 KT. ESTIMATED CENTRAL PRESSURE IS 998 HPA.

AT 1800 UTC, SATNA REPORTED LOWEST MEAN SEA LEVEL PRESSURE (MSLP) OF 998.8.0 HPA, AND MAXIMUM WIND SPEED (MSW) OF 110°/02KT. KHAJURAO ALLAHABAD REPORTED MSLP OF 1001.1 HPA, MSW OF 140°/14KT. JABALPUR REPORTED MSLP OF 1001.2 HPA, MSW OF 320°/01KT.

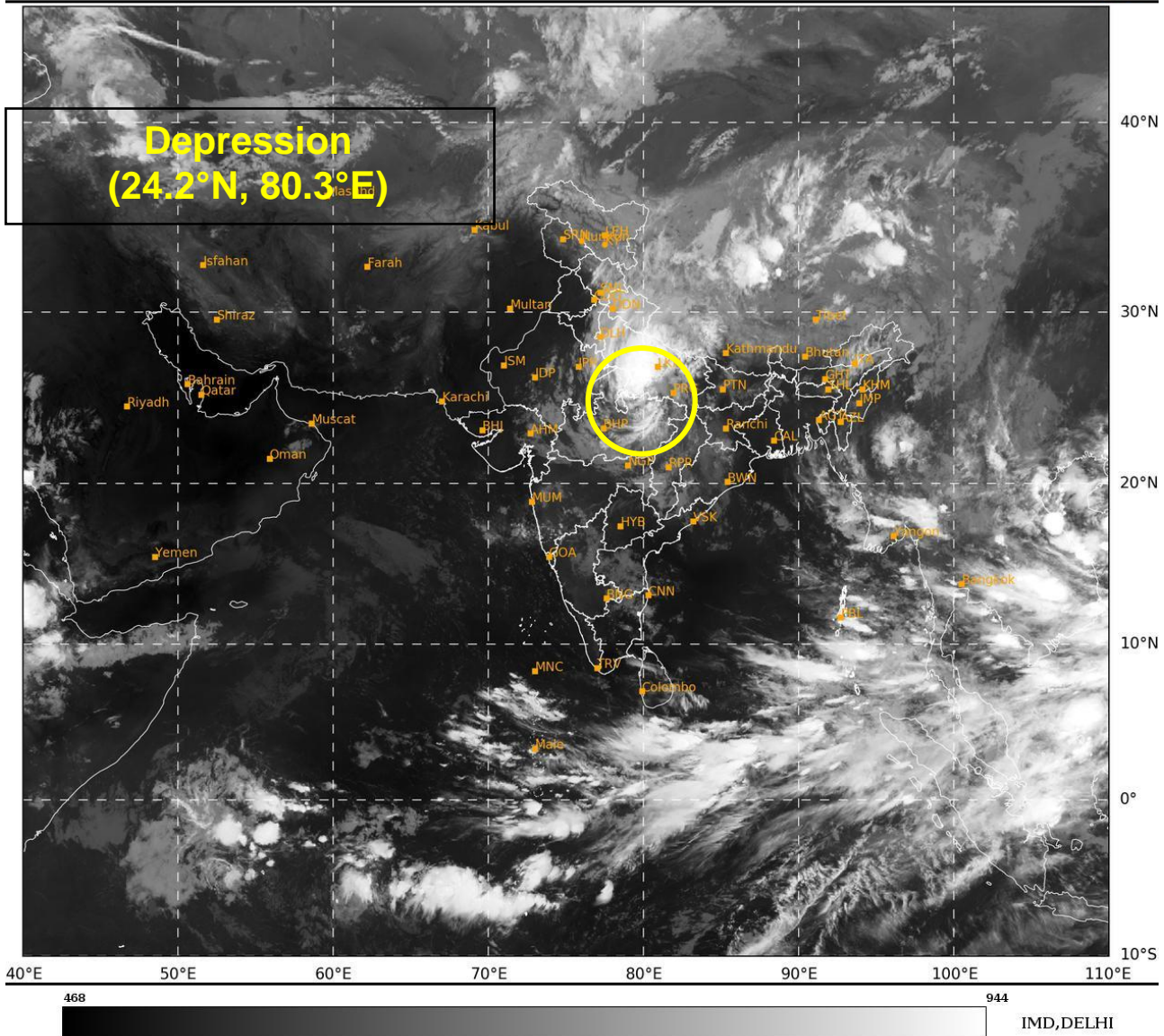
REMARKS:

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 IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ EAST OF THE SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS AROUND $30 \times 10^{-5} \text{ S}^{-1}$ OVER SYSTEM AREA. THE WIND SHEAR IS MODERATE TO UNFAVORABLE OVER SYSTEM AREA AND ALONG THE FORECAST TRACK. VORTICITY AT 850 HPA LEVEL IS MORE THAN $200 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE. THE VORTICITY AT UPPER LEVELS HAS ALSO DECREASED. CONVECTION HAS ALSO SHIFTD TO THE NORTH. ENVIRONMENTAL FEATURES ARE INDICATING GRADUAL WEAKENING OF SYSTEM.

IMD MME IS INDICATING GRADUAL WEST-NORTHWESTWARDS MOVEMENT ACROSS NORTHEAST MADHYA PRADESH AND GRADUAL WEAKENING INTO A WELL MARKED LOW PRESSURE AREA AROUND 1800 UTC OF 17TH SEPTEMBER OVER NORTHWEST MADHYA PRADESH.

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

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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 DEPRESSION OVER NORTHEAST MADHYA PRADESH BASED ON 1800 UTC (2330 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 (≥ 120 KT)

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