



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 25.08.2024

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 25.08.2024 BASED ON 1800 UTC OF 25.08.2024.

LAND DEPRESSION OVER CENTRAL AND WEST INDIA:

SUB: DEPRESSION INTENSIFIED INTO DEEP DEPRESSION OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH

THE DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN MOVED WEST-SOUTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 6 HOURS, INTENSIFIED INTO A **DEEP DEPRESSION** AND LAY CENTERED AT 1800 UTC OF THE 25TH AUGUST OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH NEAR LATITUDE 24.3°N AND LONGITUDE 74.7°E, ABOUT 70 KM SOUTH-SOUTHEAST OF CHITTORGARH (42546), 90 KM SOUTHEAST OF UDAIPUR (42543) AND 250 KM EAST OF DEESA (42539).

IT IS LIKELY TO CONTINUE TO MOVE WEST-SOUTHWESTWARDS ACROSS SOUTH RAJASTHAN AND GUJARAT REGION AND REACH SAURASHTRA & KUTCH AND ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA BY MORNING OF 29TH AUGUST.

THE 1800 UTC BASED INSAT 3D IMAGERY INDICATES FURTHER ORGANIZATION OF CLOUD MASS AND APPEARANCE OF SPIRAL BANDING OF CLOUDS UPTO GUJARAT AND ADJOINING PAKISTAN. IN ASSOCIATION WITH DEEP DEPRESSION OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER RAJASTHAN, WEST MADHYA PRADESH AND GUJARAT (MINIMUM CLOUD TOP TEMPERATURE(CTT) MINUS 93⁰ C) AND MODERATE TO INTENSE CONVECTION LAY OVER MADHYA MAHARASHTRA AND KONKAN & GOA (MINIMUM CTT MINUS 50⁰-60⁰ C). LATEST IMAGERY INDICATES MOISTURE FEEDBACK INTO THE SYSTEM AREA FROM ARABIAN SEA. THE LATEST WATER VAPOR IMAGERY INDICATES SUFFICIENT MOISTURE IN MIDDLE LEVEL.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 993 HPA. AT 1800 UTC, KOTA REPORTED MEAN SEA LEVEL PRESSURE OF 996.7 HPA & PRESSURE CHANGE IN 24 HOURS AS -4.1 HPA. UDAIPUR REPORTED MEAN SEA LEVEL PRESSURE OF 996.5 HPA & PRESSURE CHANGE IN 24 HOURS AS -5.9 HPA.

ARABIAN SEA:

(I) SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH THE SYSTEM LIKELY TO EMERGE INTO NORTHEAST ARABIAN SEA FROM INDIA AROUND 29TH AUGUST:

- SQUALLY WEATHER WITH WIND SPEED REACHING 30-40 KMPH GUSTING TO 50 KMPH IS LIKELY OVER NORTHEAST ARABIAN SEA & ADJOINING EASTCENTRAL ARABIAN SEA AND ALONG & OFF GUJARAT & ADJOINING PAKISTAN & MAHARASHTRA COASTS TILL 27TH AUGUST. THE WIND SPEED WOULD GRADUALLY INCREASE THEREAFTER BECOMING 55-65 KMPH GUSTING TO 75 KMPH OVER THESE REGIONS ON 29TH & 30TH AUGUST. ROUGH TO VERY ROUGH SEA CONDITIONS IS VERY LIKELY TO PREVAIL ALONG & OFF PAKISTAN, GUJARAT & NORTH MAHARASHTRA COASTS AND NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA TILL 30TH AUGUST.
- FISHERMEN ARE ADVISED NOT VENTURE INTO NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN, GUJARAT & NORTH MAHARASHTRA COASTS TILL 30TH AUGUST.

(II) CLOUDS ASSOCIATED WITH ARABIAN SEA:

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST ARABIAN SEA OFF GUJARAT COAST, GULF OF KUTCH AND GULF OF CAMBAY. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER EAST CENTRAL AND SOUTH ARABIAN SEA AND WEAK TO MODERATE CONVECTION OVER NORTHWEST AND WESTCENTRAL ARABIAN SEA, LAKSHADWEEP ISLANDS.

*PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS OVER ARABIAN SEA:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	MOD	HIGH	HIGH	-

*NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY

BAY OF BENGAL:

SUB: LOW PRESSURE AREA OVER BANGLADESH & ADJOINING GANGETIC WEST BENGAL

THE LOW PRESSURE AREA OVER SOUTH BANGLADESH & NEIGHBOURHOOD LAY OVER BANGLADESH AND ADJOINING GANGETIC WEST BENGAL AT 1800 UTC OF THE 25TH AUGUST 2024. IT IS LIKELY TO BECOME MORE MARKED AND MOVE WEST-NORTHWESTWARDS ACROSS GANGETIC WEST BENGAL, NORTH ODISHA AND JHARKHAND DURING NEXT 2 DAYS.

ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST JHARKHAND, GANGETIC WEST BENGAL, BANGLADESH & NORTH BAY OF BENGAL (MINIMUM CTT MINUS 93C) AND MODERATE TO INTENSE CONVECTION LAY OVER REST OF SOUTH BAY, GULF OF MARTABAN AND TENASSERIM COAST.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 5-10 KTS. ESTIMATED CENTRAL

PRESSURE IS 998 HPA. AT 1800 UTC, FARIDPUR (BANGLADESH) REPORTED MEAN SEA LEVEL PRESSURE OF 1000.8 HPA & PRESSURE CHANGE IN 24 HOURS AS -4.4 HPA.

SEA CONDITION AND ADVISORY FOR FISHERMEN:

- SQUALLY WEATHER WITH WIND SPEED REACHING 30-40 KMPH GUSTING 50 KMPH AND ROUGH SEA CONDITION IS VERY LIKELY TO PREVAIL OVER NORTH BAY OF BENGAL AND ALONG & OFF NORTH ODISHA, WEST BENGAL, BANGLADESH COASTS ON 26TH AUGUST.
- FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTH BAY OF BENGAL AND ALONG & OFF NORTH ODISHA, WEST BENGAL, BANGLADESH COASTS ON 26TH AUGUST.

***PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AN AMPLITUDE GREATER THAN 1. IT IS LIKELY TO MOVE EASTWARDS ACROSS PHASE 3 AND 4 WITH AMPLITUDE REMAINING CLOSE TO 1 DURING THE FIRST WEEK. THEREFORE, THE MJO INDEX IS LIKELY TO ENHANCE THE CONVECTIVE ACTIVITY OVER EASTERN PARTS OF ARABIAN SEA (AS) DURING FIRST HALF THE WEEK 1 AND OVER THE BAY OF BENGAL (BOB) DURING THE WHOLE WEEK. THE NCICS FORECASTS INDICATE SIGNIFICANT PRESENCE OF CONVECTIVELY COUPLED EQUATORIAL ROSSBY WAVES (ERW) PROPAGATING WESTWARDS STARTING FROM SOUTH CHINA SEA AND BOB TO SOUTHEAST AND EASTCENTRAL AS DURING THE FIRST WEEK. THE WEAK WESTERLY WINDS (1-3 MPS) ARE LIKELY OVER SOUTHERN AND ADJOINING CENTRAL PARTS OF AS AND BOB DURING NEXT FIVE DAYS. THE EASTWARD-MOVING KELVIN WAVES (KW) ARE ALSO LIKELY OVER NORTHERN PARTS OF AS AND SOUTH BOB DURING NEXT FIVE DAYS. THEREFORE, THE ZONAL WINDS AND EQUATORIAL WAVES ARE LIKELY TO SUPPORT CONVECTIVE ACTIVITIES ASSOCIATED WITH THE DEPRESSION OVER CENTRAL INDIA LOW PRESSURE AREA OVER BANGLADESH AND NEIGHBOURHOOD. THE EAST-NORTHEASTERLY WINDS IN THE MIDDLE LEVELS SUGGEST WEST-SOUTHWESTWARDS STEERING OF THE DEPRESSION OVER CENTRAL & WEST INDIA. THE APPROACHING TROUGH (EXTENDING UPTO 30 DEGREE NORTH NEAR 70 DEGREE EAST) IN WESTERLY IS LIKELY TO FAVOUR INTENSIFICATION OF THE SYSTEM, LEADING TO ENHANCED POLEWARD OUTFLOW. THE LOW LEVEL CONVERGENCE IS AROUND $10 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH WEST OF SYSTEM CENTRE EXTENDING UPTO EASTCENTRAL ARABIAN SEA. THE WIND SHEAR IS MODERATE OVER THE SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $100 \times 10^{-5} \text{ S}^{-1}$ NEAR THE SYSTEM AREA EXTENDING UP TO 200 HPA. FAVORABLE MJO, PRESENCE OF EQUATORIAL WAVES, MOISTURE FEEDBACK FROM ARABIAN SEA MODERATE WIND SHEAR. FURTHER, THE UPPER TROPOSPHERIC RIDGE IS LOCATED NEAR 28 DEGREE NORTH IN ASSOCIATION WITH ANTI CYCLONIC CIRCULATION OVER PAKISTAN. THE SYSTEM IS LYING TO THE SOUTH OF RIDGE AND IS BEING STEERED WEST- SOUTHWESTWARDS BY THE EAST-NORTHEASTERLY WAVES PREVAILING OVER THE SYSTEM AREA. HOWEVER, THE APPROACHING TROUGH IN WESTERLY WOULD SLOW DOWN THE MOVEMENT OF THE SYSTEM.

THE LOW LEVEL CONVERGENCE IS AROUND $10 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM AREA. UPPER LEVEL DIVERGENCE IS ALSO AROUND $10 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM AREA. THE WIND SHEAR IS LOW TO MODERATE OVER THE SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $60-80 \times 10^{-5} \text{ S}^{-1}$ WITH VERTICAL EXTENTION UPTO 500 HPA. FAVORABLE MJO, PRESENCE OF EQUATORIAL WAVES, MOISTURE FEEDBACK FROM BAY OF BENGAL, MODERATE WIND SHEAR, WOULD FAVOR SUPPORT DEVELOPMENT OF SYSTEM INTO WELL MARKED LOW PRESSURE AREA.

MOST OF THE NUMERICAL WEATHER PREDICTION MODELS (IMD GFS, NCEP GFS, GEFS, ECMWF, AND NCUM) HAVE CONSENSUS AND INDICATE THAT THE EXISTING DEEP DEPRESSION OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH WOULD MOVE WEST-SOUTHWESTWARDS OVER SOUTH RAJASTHAN AND ADJOINING NORTH GUJARAT. MODELS ARE ALSO INDICATING FURTHER INTENSIFICATION OF SYSTEM WITH GFS & NCUM SHOWING HIGHER INTENSIFICATION (UPTO SEVERE & ABOVE CATEGORY) AND ECMWF SHOWING MARGINAL CYCLONE. HOWEVER, THERE IS A CONSENSUS AMONG VARIOUS MODELS THAT THE SYSTEM WOULD PERSIST OVER SAURASHTRA & KUTCH REGION DURING 28TH TO 30TH AUGUST.

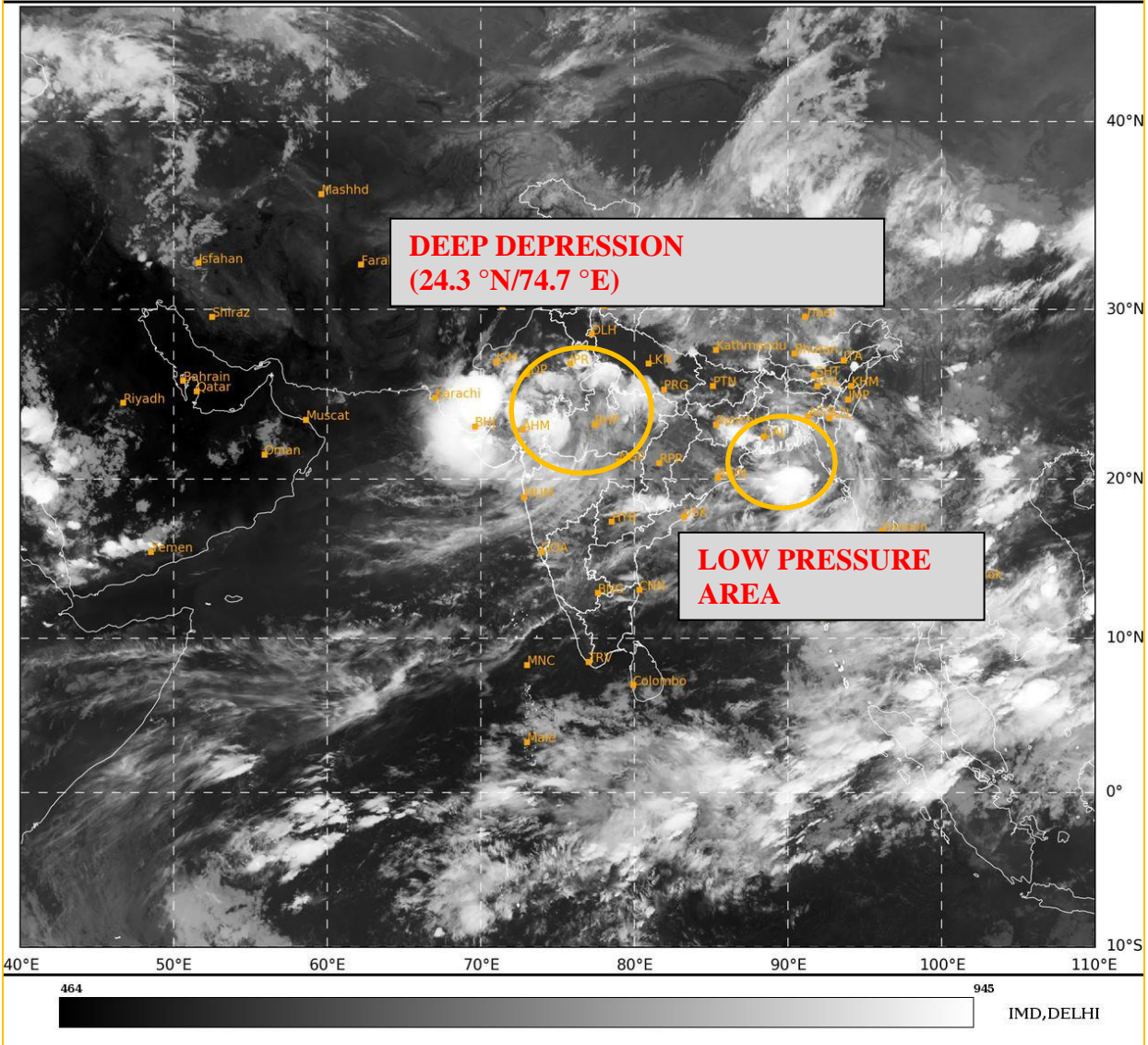
WITH RESPECT TO BAY OF BENGAL SYSTEM MODELS ARE NOT INDICATING SIGNIFICANT INTENSIFICATION AND THERE IS ALSO CONSENSUS AMONG MODELS REGARDING WEST NORTH WEST WARD MOVEMENT OF THE SYSTEM.

CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT THE DEEP DEPRESSION OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH WOULD GRADUALLY MOVE TOWARDS SAURASHTRA & KUTCH AND ADJOINING PAKISTAN AND NORTHEAST ARABIAN SEA AROUND 0000 UTC OF 29TH AUGUST.

(SHIBIN BALAKRISHNAN)
RSMC NEW DELHI

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

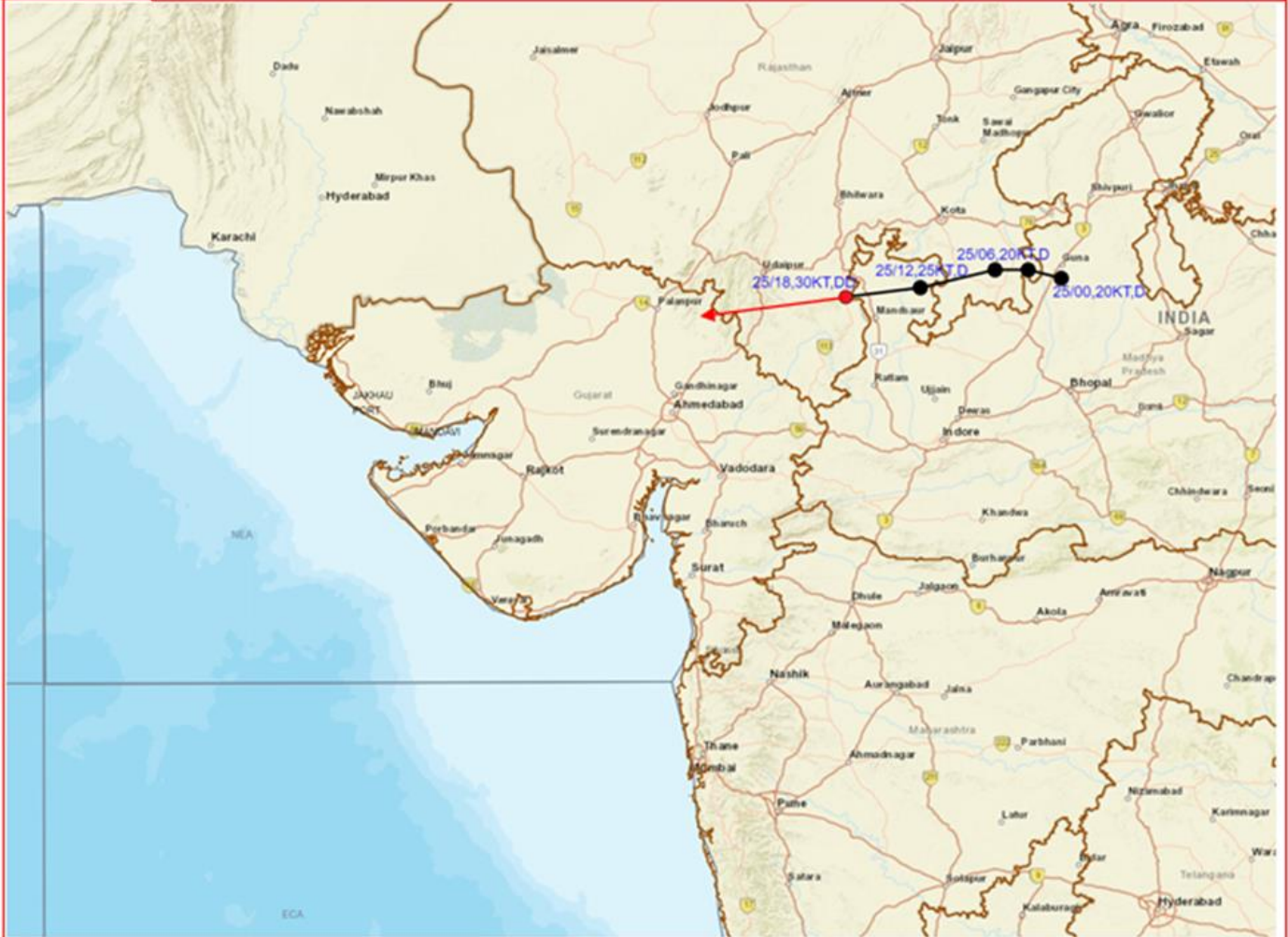
25-08-2024/(1715 to 1742) GMT
25-08-2024/(2245 to 2312) IST



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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER EAST RAJASTHAN AND ADJOINING WEST MADHYA PRADESH BASED ON 1800 UTC (2330 IST) OF 25TH AUGUST, 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

Fishermen Warning Graphics

