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 1530 UTC OF 25.08.2024 BASED ON 1200 UTC OF 25.08.2024.

LAND DEPRESSION OVER CENTRAL AND WEST INDIA:

SUB: DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN

THE DEPRESSION OVER RAJASTHAN AND ADJOINING NORTHWEST MADHYA PRADESH MOVED WEST-SOUTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 25TH AUGUST OVER NORTHWEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN NEAR LATITUDE 24.4°N AND LONGITUDE 75.6°E, ABOUT 110 KM EAST-SOUTHEAST OF CHITTORGARH (42546), 130 KM NORTH-NORTHEAST OF RATLAM (42661) AND 190 KM EAST OF UDAIPUR (42543).

IT IS LIKELY TO CONTINUE TO MOVE NEARLY WEST-SOUTHWESTWARDS, INTENSIFY FURTHER INTO A DEEP DEPRESSION OVER EAST RAJASTHAN DURING NEXT 12 HOURS. CONTINUING TO FURTHER MOVE SLOWLY WEST-SOUTHWESTWARDS ACROSS SOUTH RAJASTHAN AND GUJARAT, IT WOULD EMERGE INTO NORTHEAST ARABIAN SEA OFF SAURASHTRA & KUTCH AND ADJOINING PAKISTAN COASTS AROUND MORNING OF 29TH AUGUST.

THE 1200 UTC BASED INSAT 3D IMAGERY INDICTES FURTHER ORGANIZATION OF CLOUD MASS AND APPERANCE OF SPIAL BANDING OF CLOUDS UPTO GUJARAT AND ADJOINING PAKISTAN. IN ASSOCIATION WITH DEPRESSION OVER NORTHWEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBDD INTENSE TO VERY INTENSE CONVECTION LAY OVER MADHYA PRADESH ADJOINING EAST RAJASTHAN, SOUTH & EAST GUJARAT (MINIMUM CLOUD TOP TEMPERATURE(CTT) MINUS 93^0 C) AND MODERATE TO INTENSE CONVECTION LAY OVER MAHARASHTRA (MINIMUM CTT MINUS 50^0-60^0 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 25 KTS GUSTING TO 35 KTS. ESTIMATED CENTRAL PRESSURE IS 993 HPA. AT 1200 UTC, KOTA REPORTED MEAN SEA LEVEL PRESSURE OF 995.7 HPA & PRESSURE CHANGE IN 24 HOURS AS -2.7 HPA DEPARTURE OF -4.5 HPA. UDAIPUR REPORTED MEAN SEA LEVEL PRESSURE OF 995.8 HPA & PRESSURE CHANGE IN 24 HOURS AS -4.9 HPA AND DEPARTURE OF -5.0 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 GULF OF KUTCH SCT LOW AND MED CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER EAST CENTRAL ARBIAN SEA GULF OF CAMBAY SOUTH ARABIAN SEA LAKSHWDEEP ISLAND ARSES AND WEAK TO MODERATE CONVECTION OVER WEST CENTRAL ARABIAN SEA

***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 SOUTH BANGLADESH & NEIGHBOURHOOD

THE LOW PRESSURE AREA FORMED OVER SOUTH BANGLADESH & NEIGHBOURHOOD PERSISTED OVER THE SAME REGION AT 1200 UTC OF TODAY, 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 GANGETIC WEST BENGAL, BANGLADESH & NORTH BAY OF BENGAL (MINIMUM CTT MINUS 930C) AND MODERATE TO INTENSE CONVECTION LAY OVER REST OF GANGETIC WEST BENGAL & NORTH ODISHA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 5-10 KTS. ESTIMATED CENTRAL PRESSURE IS 998 HPA. AT 1200 UTC, BHOLA (BANGLADESH) REPORTED MEAN SEA LEVEL PRESSURE OF 998.9 HPA & PRESSURE CHANGE IN 24 HOURS AS -3.3 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 25TH AND 26TH AUGUST.
- FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTH BAY OF BENGAL AND ALONG & OFF NORTH ODISHA, WEST BENGAL, BANGLADESH COASTS ON 25TH AND 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 $10X10^{-5}$ S^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND $20X10^{-5}$ 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 $100X10^{-5}$ 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, INCREASED DIVERGENCE ARE INDICATING A FAVORABLE ENVIRONMENT FOR FURTHER INTENSIFICATION OF THE DEPRESSION OVER NORTH WEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN. FURTHER, THE UPPER TROPOSPEHRIC 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.

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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THE LOW LEVEL CONVERGENCE IS AROUND $10X10^{-5}$ S^{-1} TO THE SOUTH OF SYSTEM AREA. UPPER LEVEL DIVERGENCE IS ALSO AROUND $10X10^{-5}$ 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 $60\text{-}80X10^{-5}$ 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 DEPRESSION OVER NORTH WEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN WOULD MOVE NEARLY WEST-SOUTHWESTWARDS, INTENSIFY INTO A DEEP DEPRESSION OVER SOUTH RAJASTHAN AND ADJOINING NORTH GUJARAT AROUND 27^{TH} AUGUST. 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 28^{TH} TO 30^{TH} AUGUST.

WITH RESPECT TO BAY OF BENGAL SYSTEM MODELS ARE NOT INDICATIG 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 DEPRESSION OVER NORTH WEST MADHYA PRADESH AND ADJOINING EAST RAJASTHAN WOULD GRADUALLY INTENSIFY FURTHER AND EMERGE INTO NORTHEAST ARABIAN SEA OFF SAURASHTRA & KUTCH AND ADJOINING PAKISTAN COASTS AROUND 0000 UTC OF 29TH AUGUST.

(MONICA SHARMA)
RSMC NEW DELHI

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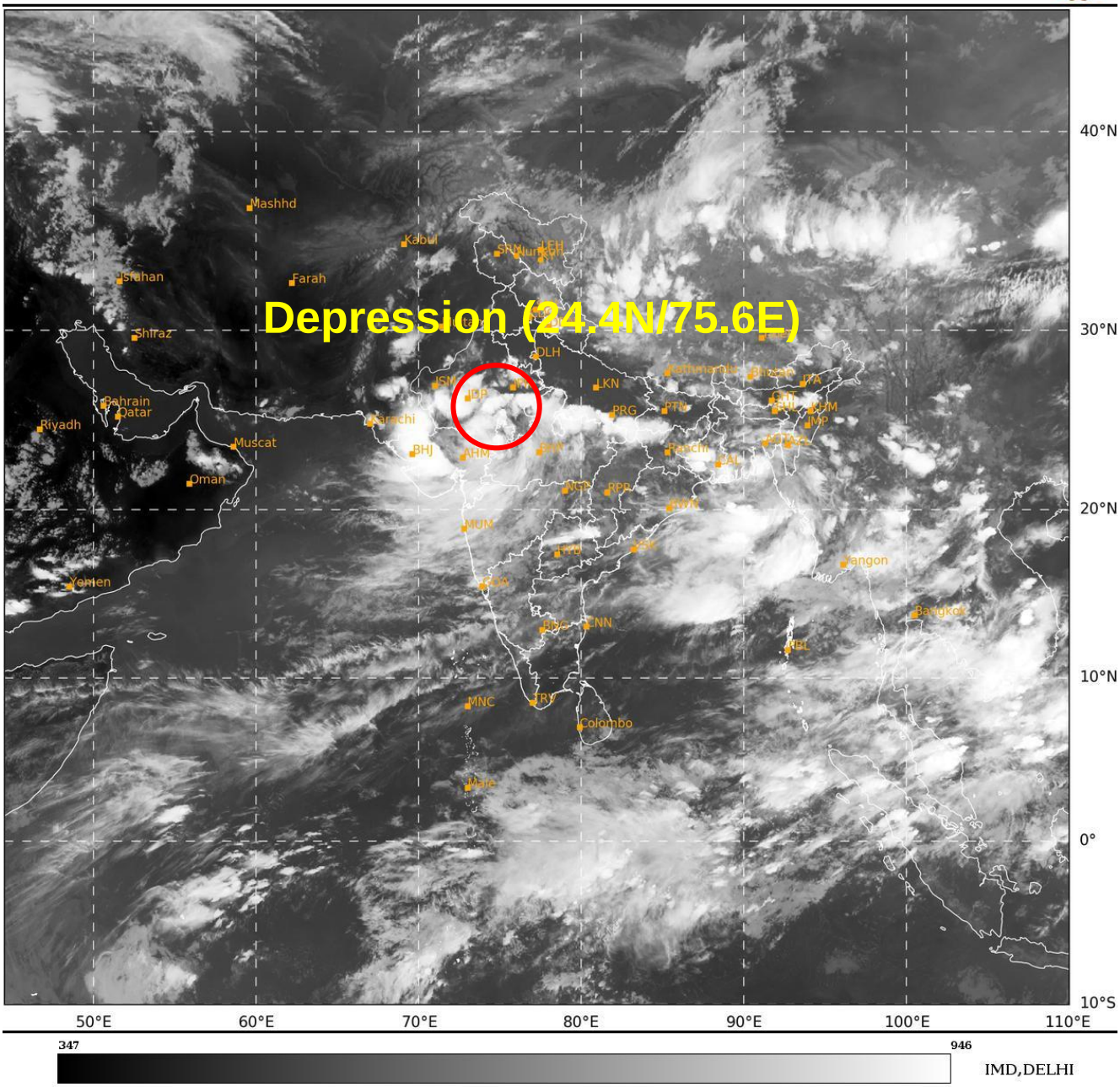
SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

25-08-2024/(1315 to 1342) GMT
25-08-2024/(1845 to 1912) IST



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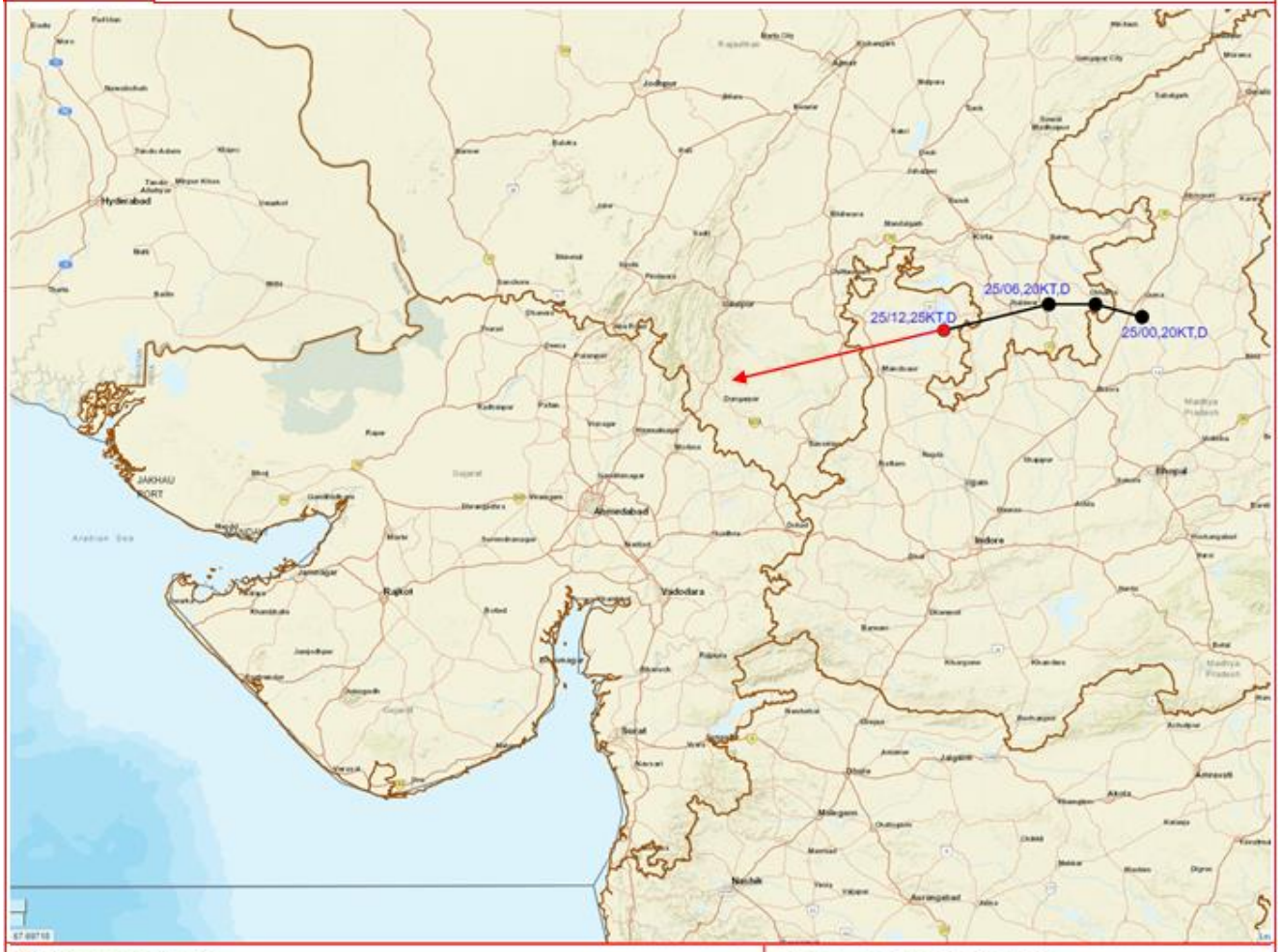
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER NORTHWEST MADHYA PRADESH ADJOINING EAST RAJASTHAN BASED ON 1200 UTC (1730 IST) OF 25TH AUGUST, 2024.



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

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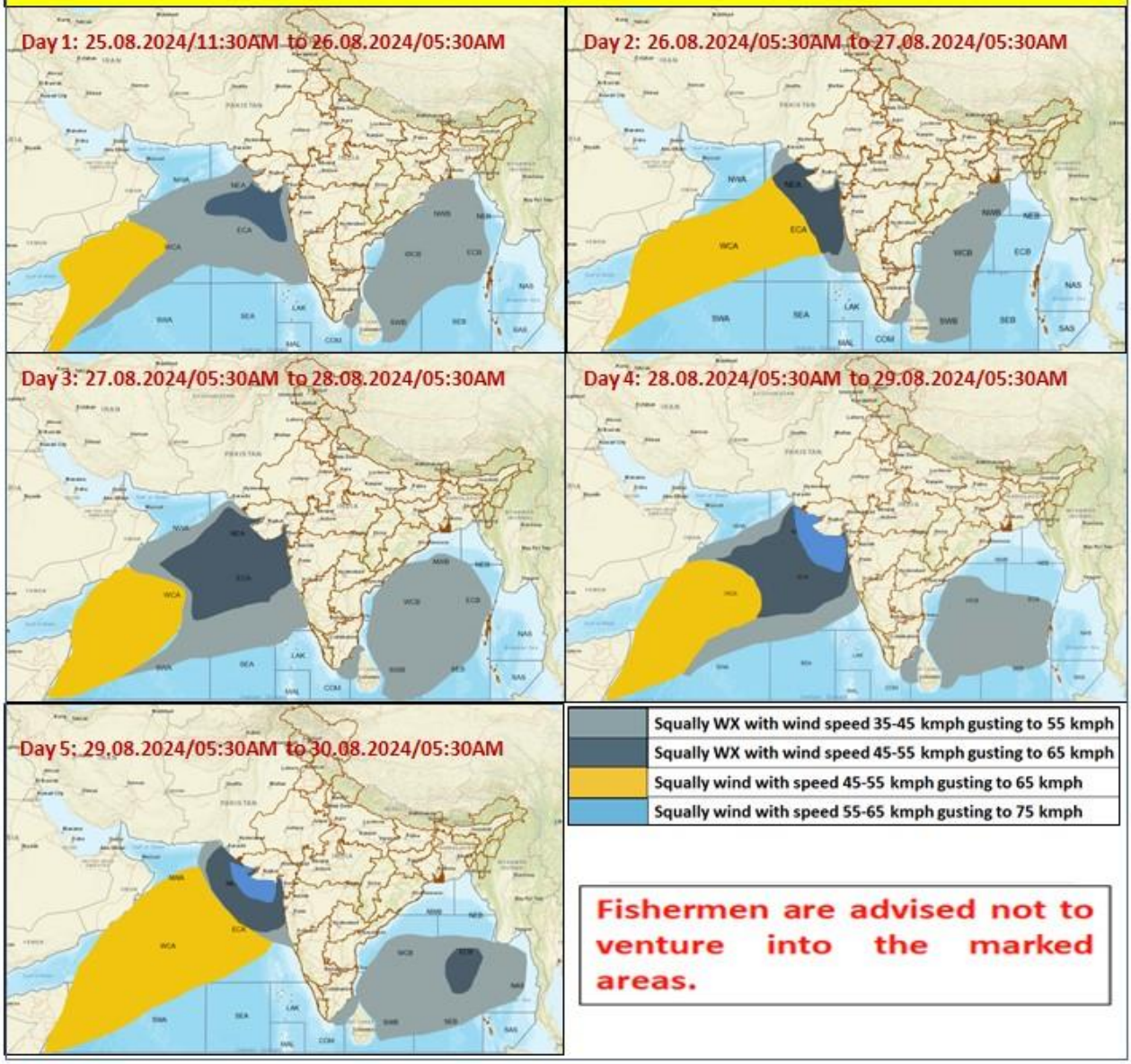
Fishermen Warning Graphics



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