



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 27.08.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0930 UTC OF 27.08.2024 BASED ON 0600 UTC OF 27.08.2024.

LAND DEPRESSION OVER NORTHWEST INDIA:

SUB: (A) DEEP DEPRESSION OVER NORTH GUJARAT

THE DEEP DEPRESSION OVER NORTH GUJARAT MOVED SLOWLY WESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 27TH AUGUST OVER THE SAME REGION NEAR LATITUDE 23.7°N AND LONGITUDE 71.7 °E, ABOUT 20 KM SOUTHEAST OF RADHANPUR, 80 KM SOUTHWEST OF DEESA (42539), 120 KM NORTHWEST OF AHMEDABAD (42697), 110 KM NORTH OF SURENDRANAGAR (42740) AND 200 KM EAST-NORTHEAST OF BHUJ (42634).

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

INSAT 3DR IMAGERY AT 0600 UTC SHOWS SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER GUJARAT ADJOINING SOUTH RAJASTHAN, GULF OF KUTCH, GULF OF CAMBAY and NORTHEAST ARABIAN SEA (MINIMUM CTT MINUS 93 DEG CEL) AND MODERATE TO INTENSE CONVECTION OVER EXTREME SOUTHWEST MADHYA PRADESH, KARNATAKA AND MADHYA MAHARASHTRA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 992 HPA. AT 0600 UTC, DEESA REPORTED MEAN SEA LEVEL PRESSURE OF 995.3 HPA & PRESSURE CHANGE IN 24 HOURS AS -1.2 HPA, WIND SPEED 6 KT. BHUJ REPORTED MEAN SEA LEVEL PRESSURE OF 996.0 HPA & PRESSURE CHANGE IN 24 HOURS AS -4.2 HPA WITH WIND SPEED 8 KT. AHMEDABAD REPORTED MEAN SEA LEVEL PRESSURE OF 997.9 HPA & PRESSURE CHANGE IN 24 HOURS AS +2.1 HPA WITH WIND SPEED 12 KT.

(II) ARABIAN SEA:

SEA CONDITION AND ADVISORY FOR FISHERMEN IN ASSOCIATION WITH THE MOVEMENT OF THE SYSTEM OVER SAURASHTRA & KUTCH AND ADJOINING PAKISTAN AND NORTHEAST ARABIAN SEA FROM INDIA DURING 27-30TH AUGUST:

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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- SQUALLY WIND SPEED REACHING 55-65 KMPH GUSTING TO 75 KMPH IS LIKELY TO PREVAIL ALONG & OFF GUJARAT COASTS & ADJOINING PAKISTAN COASTS AND NORTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA DURING 27TH-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 TO VENTURE INTO NORTHEAST & ADJOINING EASTCENTRAL ARABIAN SEA AND ALONG & OFF PAKISTAN, GUJARAT & NORTH MAHARASHTRA COASTS TILL 30TH AUGUST.

CLOUDS ASSOCIATED WITH ARABIAN SEA:

BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST ARABIAN SEA, GULF OF KUTCH AND GULF OF CAMBAY. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTHWEST & CENTRAL ARABIAN SEA AND SOUTHEAST ARABIAN SEA AND ISOLATED WEAK TO MODERATE CONVECTION LAY OVER REST 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	MOD	HIGH	HIGH	-	-	-

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY (-) INDICATES GENESIS HAS ALREADY OCCURRED.**

(III) LOW PRESSURE AREA OVER NORTHWEST JHARKHAND AND NEIGHBOURHOOD

THE LOW PRESSURE AREA OVER NORTHWEST JHARKHAND & NEIGHBOURHOOD MOVED SLIGHTLY WEST-NORTHWESTWARDS AND LAY OVER THE SAME REGION AT 0600 UTC OF TODAY, THE 27TH AUGUST 2024. IT IS LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND, AND NORTH CHHATTISGARH & ADJOINING SOUTHEAST UTTAR PRADESH AND WEAKEN GRADUALLY DURING NEXT 24 HOURS.

ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST MADHYA PRADESH, BIHAR, JHARKHAND, NORTH CHHATTISGARH. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 70-80 DEG CELSIUS.

(IV) BAY OF BENGAL:

A FRESH LOW PRESSURE AREA IS LIKELY TO FORM OVER EASTCENTRAL AND ADJOINING NORTH BAY OF BENGAL ON 29TH AUGUST. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS SUTH ODISHA ANDNORTH ANDHRA PRADESH COASTS DURING SUBSEQUENT TWO DAYS.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL AND ANDAMAN SEA.

***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 4 WITH AMPLITUDE GREATER THAN 1. IT IS LIKELY TO MOVE ACROSS PHASE 4 AND 5 WITH AMPLITUDE REMAINING MORE THAN 1 DURING NEXT 5 DAYS. THE NCICS FORECASTS INDICATE SIGNIFICANT PRESENCE OF CONVECTIVELY COUPLED EQUATORIAL ROSSBY WAVES (ERW) PROPAGATING WESTWARDS STARTING FROM BOB,CENTRAL INDIA AND CENTRAL ARABIAN SEA DURING NEXT 5 DAYS. THE WESTERLY WINDS (5-7 MPS) ARE LIKELY OVER THE SAME REGION AND STRONG EASTERLIES (5-7 MPS) OVER THE NORTHWESTERN PARTS OF INDIA AND NORTHEAST ARABIAN SEA DURING NEXT FIVE DAYS. THE EASTWARD-MOVING KELVIN WAVES (KW) ARE ALSO LIKELY OVER SOUTHEAST ARABIAN SEA. THESE FEATURES ARE FAVOURABLE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE ARABIAN SEA AND ALSO OVER THE BAY OF BENGAL.

VORTICITY AT 850 HPA LEVEL IS AROUND $250 \times 10^{-5} \text{ S}^{-1}$ NEAR THE SYSTEM AREA EXTENDING UPTO 200 HPA. SHEAR TENDENCY IS INCREASING OVER SYSTEM AREA AND DECREASING TOWARDS SOUTH PAKISTAN. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT $25 \times 10^{-5} \text{ S}^{-1}$ AROUND SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED AND IS ABOUT $30 \times 10^{-5} \text{ S}^{-1}$ AROUND SYSTEM AREA EXTENDING UPTO EASTCENTRAL ARABIAN SEA. THE WIND SHEAR IS MODERATE (15-25 KNOTS) OVER THE SYSTEM AREA.

MOST OF THE NUMERICAL WEATHER PREDICTION MODELS (IMD GFS, NCEP GFS, GEFS, ECMWF, AND NCUM) INDICATE THAT THE EXISTING DEEP DEPRESSION OVER NORTH GUJARAT MOVE WEST-SOUTHWESTWARDS ACROSS NORTH GUJARAT. THERE IS A CONSENSUS AMONG VARIOUS MODELS THAT THE SYSTEM WOULD PERSIST OVER SAURASHTRA & KUTCH REGION DURING 28TH TO 30TH AUGUST. HOWEVER, THERE IS VARIATION AMONG MODELS WRT INTENSIFICATION OF SYSTEM WITH GFS & NCUM GROUP STILL SHOWING HIGHER INTENSIFICATION UPTO VERY SEVERE CYCLONIC STORM CATEGORY AND ECMWF & NCEP GFS ARE SHOWING PEAK INTENSIFICATION UPTO DEEP DEPRESSION STAGE ONLY. ECMWF AND NCEP GFS ARE ALSO INDICATING DRY AIR INCURSION INTO THE SYSTEM AREA FROM 28TH/ 1200 UTC ONWARDS. IMD MME IS INDICATING NEAR WESTWARDS MOVEMENT AND PEAK INTENSIFICATION UPTO MARGINAL CYCLONIC STORM/DEEP DEPRESSION.

REGARDING LAND DEPRESSION OVER NORTHWEST JHARKHAND, MOST OF THE MODELS ARE INDICATING WEAKENING DURING NEXT 24 HOURS.

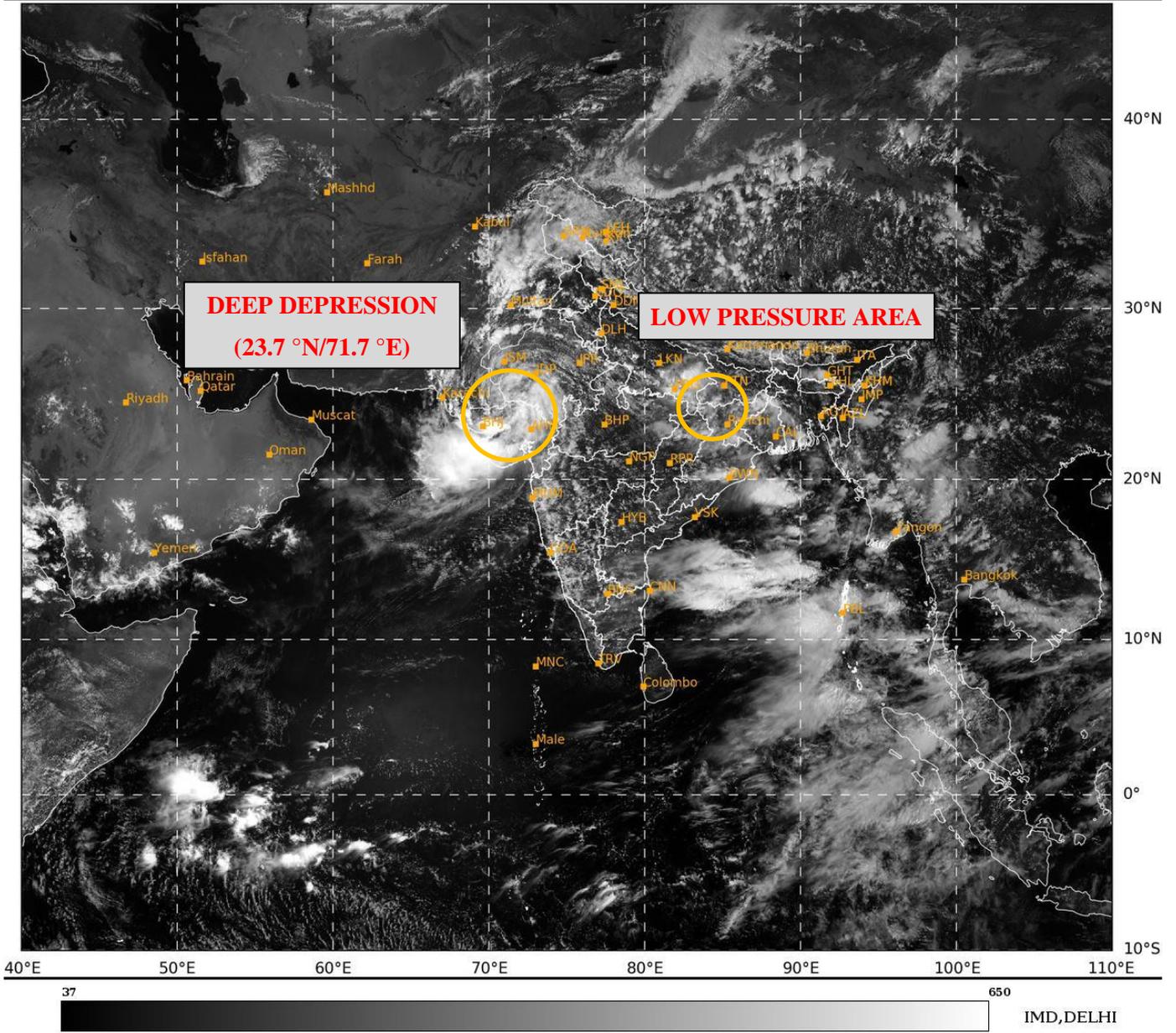
OVER THE BAY OF BENGAL, MOST OF THE MODELS ARE INDICATING DEVELOPMENT OF LOW PRESSURE AREA OVER CENTRAL BAY OF BENGAL AROUND 29TH AUGUST WITH WEST-NORTHWESTWARDS MOVEMENT TOWARDS

SOUTH ODISHA & ADJOINING NORTH ANDHRA PRADESH COASTS. HOWEVER, GFS AND NCUM ARE ALSO INDICATING INTENSIFICATION OF SYSTEM INTO A DEPRESSION AROUND 30TH AUGUST/1200 UTC. ECMWF AND NCUM ARE INDICATING DEVELOPMENT UPTO WELL MARKED LOW PRESSURE AREA STAGE ONLY.

CONSIDERING ALL THE ABOVE, IT IS INFERRED THAT:

- (1) DEEP DEPRESSION OVER GUJARAT IS LIKELY TO MOVE SLOWLY WEST-SOUTHWESTWARDS ACROSS GUJARAT REGION AND REACH SAURASHTRA & KUTCH COAST AND ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA BY MORNING OF 29TH AUGUST.
- (2) LOW PRESSURE AREA OVER JHARKHAND IS LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS JHARKHAND, NORTH CHHATTISGARH & ADJOINING SOUTHEAST UTTAR PRADESH AND WEAKEN GRADUALLY DURING NEXT 24 HOURS.
- (3) A FRESH LOW PRESSURE AREA IS LIKELY TO FORM OVER EASTCENTRAL AND ADJOINING NORTH BAY OF BENGAL ON 29TH AUGUST. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ODISHA AND NORTH ANDHRA PRADESH COASTS DURING SUBSEQUENT TWO DAYS.

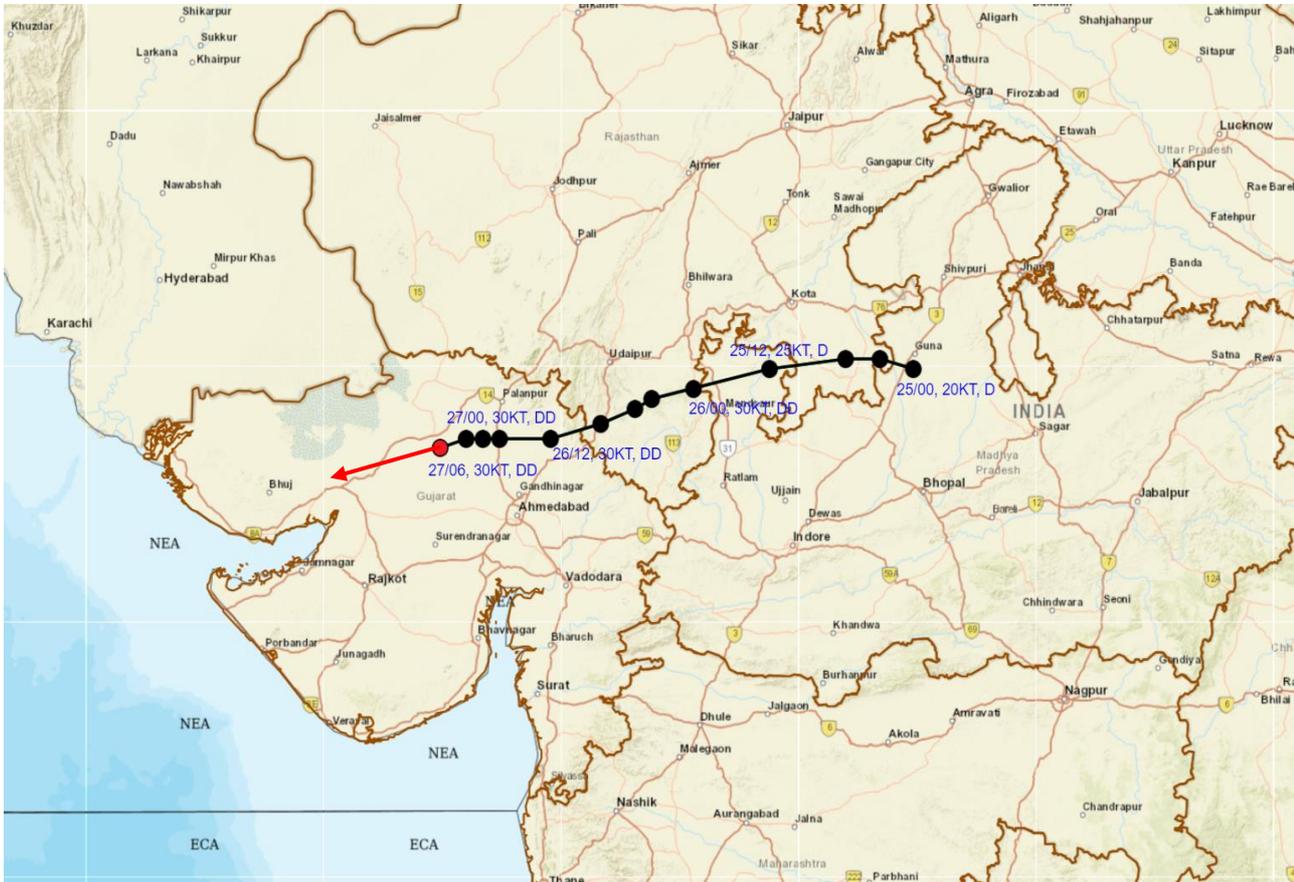
(DR. D.R. PATTANAİK)
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RSMC NEW DELHI



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OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTH GUJARAT BASED ON 0600 UTC (1130 IST) OF 27TH AUGUST, 2024.



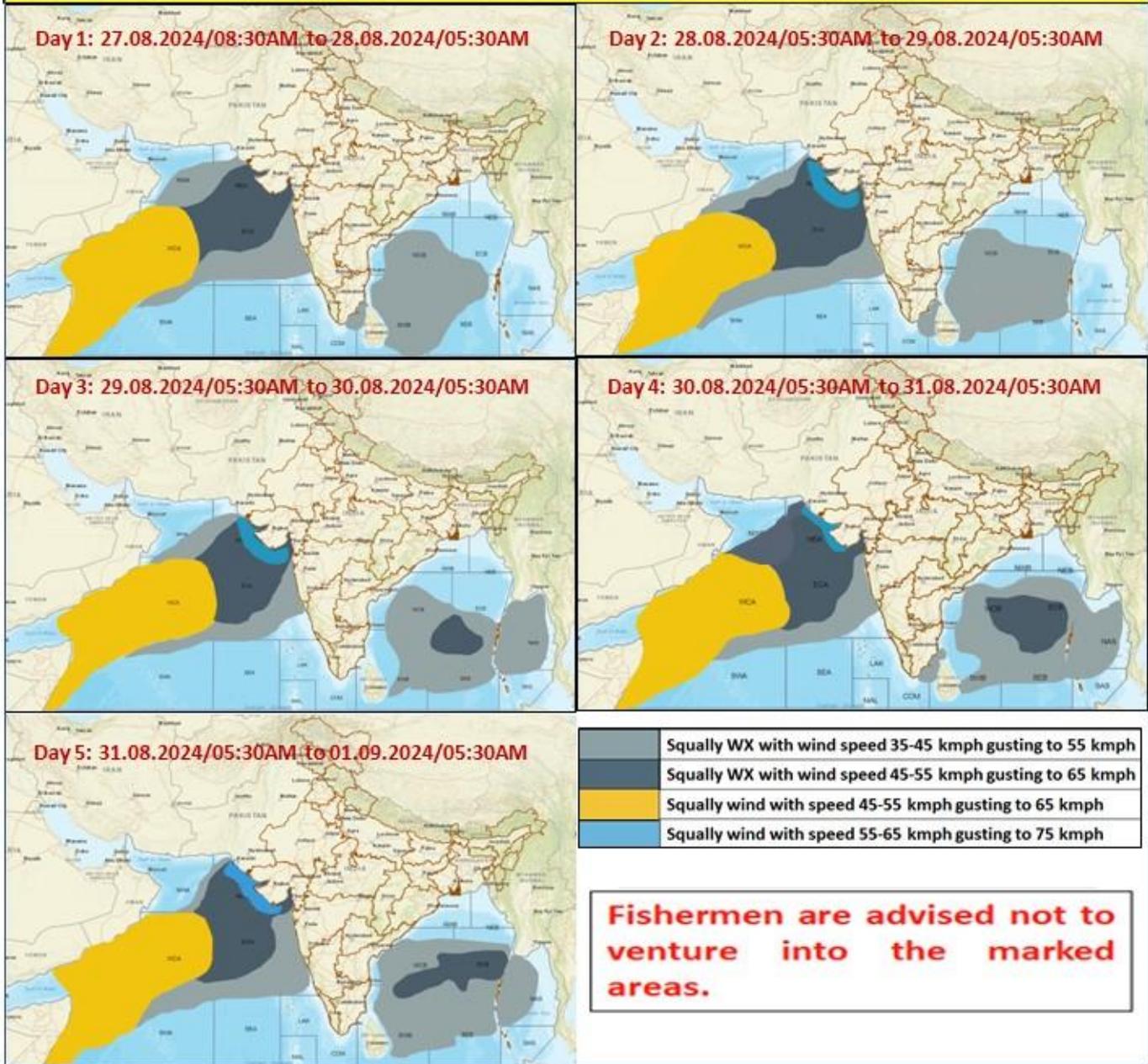
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VS CS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ES CS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

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

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Fishermen Warning Graphics



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