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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 26.08.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 1500 UTC OF 26.08.2024 BASED ON 1200 UTC OF 26.08.2024.

LAND DEPRESSION OVER WEST INDIA:

SUB: DEEP DEPRESSION OVER NORTH GUJARAT AND ADJOINING SOUTHEAST RAJASTHAN

THE DEEP DEPRESSION OVER EAST RAJASTHAN MOVED NEARLY WESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 26TH AUGUST OVER NORTH GUJARAT AND ADJOINING SOUTHEAST RAJASTHAN NEAR LATITUDE 23.8°N AND LONGITUDE 73.0 °E, ABOUT 90 KM EAST-SOUTHEAST OF DEESA (42539), 110 KM NORTHEAST OF AHMEDABAD (42697), 180 KM NORTHEAST OF SURENDRANAGAR (42740) AND 330 KM EAST-NORTHEAST OF BHUJ (42634).

IT IS LIKELY TO CONTINUE TO MOVE SLOWLY WEST-SOUTHWESTWARDS ACROSS GUJARAT REGION AND REACH SAURASHTRA & KUTCH AND ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA BY 0000 UTC OF 29TH AUGUST.

INSAT 3DR IMAGERY AT 1200 UTC SHOWS INTENSE CLOUD MASS BEING SHEARED TO WEST OF SYSTEM CENTRE. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER GUJARAT & ADJOINING SOUTHWEST MADHYA PRADESH, NORTH MADHYA MAHARASHTRA, GULF OF KUTCH, GULF OF CAMBAY, NORTHEAST ARABIAN SEA, ADJOINING SOUTH PAKISTAN (MINIMUM CLOUD TOP TEMPERATURE (CTT) MINUS 93^{0} C) AND MODERATE TO INTENSE CONVECTION OVER SOUTH RAJASTHAN AND NORTH KKARNATAKA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 989 HPA. AT 1200 UTC, DEESA REPORTED MEAN SEA LEVEL PRESSURE OF 991.7 HPA & PRESSURE CHANGE IN 24 HOURS AS -5.1 HPA WITH DEPARTURE FROM NORMAL OF -9.6 HPA. AHMEDABAD REPORTED MEAN SEA LEVEL PRESSURE OF 993.2 HPA & PRESSURE CHANGE IN 24 HOURS AS -5.7 HPA WITH DEPARTURE FROM NORMAL OF -9.1 HPA. AHMEDABAD REPORTED MEAN SEA LEVEL PRESSURE OF 996.1 HPA & PRESSURE CHANGE IN 24 HOURS AS -5.0 HPA WITH DEPARTURE FROM NORMAL OF -5.0 HPA. OVERALL A DEPARTURE FROM NORMAL OF ABOUT -5HPA TO -9 HPA FROM NALIYA TO DEESA.

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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ARABIAN SEA:

(I) **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 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 TO 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 LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTHWEST AND CENTRAL ARABIAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER REST OF NORTHWEST AND CENTRAL ARABIAN SEA AND ISOLATED WEAK CONVECTION LAY OVER SOUTH 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	MOD	HIGH	HIGH	-	-

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

(-) INDICATES GENESIS HAS ALREADY OCCURRED.

BAY OF BENGAL:

SUB: WELL MARKED LOW PRESSURE AREA OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHAND

THE WELL MARKED LOW PRESSURE AREA OVER GANGETIC WEST BENGAL MOVED WEST-NORTHWESTWARDS AND LAY OVER GANGETIC WEST BENGAL AND ADJOINING JHARKHANDAT 1200 UTC OF TODAY, THE 26TH AUGUST 2024. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS GANGETIC WEST BENGAL, JHARKHAND AND ADJOINING NORTH ODISHA DURING NEXT 2 DAYS.

ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER JHARKHAND, NORTH ODISHA, WEST BENGAL, BANGLADESH AND NORTH BAY OF BENGAL (MINIMUM CTT MINUS 80-90 DEG CEL).

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 10-15 KTS. ESTIMATED CENTRAL PRESSURE IS 998 HPA. BANKURA (WEST BENGAL) REPORTED 998.5 HPA AND JAMSHEDPUR REPORTED 998.9 HPA. DEPARTURE FROM NORMAL IS -1.7 HPA OVER THE GANGETIC WEST BENGAL AREA.

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

EMARKS:

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. ALL THESE FEATRUES INDICATE VERY FAVOURABLE ENVIRONMENT FOR INTENSIFICATION OF THE DEEP DEPRESSION OVER RAJASTHAN. THE LOW LEVEL CONVERGENCE IS AROUND $20X10^{-5}$ S^{-1} TO SOUTHWEST OF THE SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS AROUND $40X10^{-5}$ S^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE EXTENDING UPTO EASTCENTRAL ARABIAN SEA. THE WIND SHEAR IS LOW TO MODERATE OVER THE SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $250X10^{-5}$ S^{-1} NEAR THE SYSTEM AREA EXTENDING UPTO 200 HPA. FAVORABLE MJO, PRESENCE OF EQUATORIAL WAVES, MOISTURE FEEDBACK FROM ARABIAN SEA AND LOW TO MODERATE WIND SHEAR ARE SUPPORTING SYSTEM TO MAINTAIN ITS INTENSITY.

MOST OF THE NUMERICAL WEATHER PREDICTION MODELS (IMD GFS, NCEP GFS, GEFS, ECMWF, AND NCUM) INDICATE THAT THE EXISTING DEEP DEPRESSION OVER EAST RAJASTHAN WOULD MOVE WEST-SOUTHWESTWARDS ACROSS RAJASTHAN AND 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 SHOWING HIGHER INTENSIFICATION UPTO VERY SEVERE CYCLONIC STORM CATEGORY AND ECMWF IS SHOWING PEAK INTENSIFICATION UPTO DEEP DEPRESSION/MARGINAL CYCLONIC STORM. ECMWF AND NCEP GFS ARE ALSO INDICATING DRY AIR INCURSION INTO THE SYSTEM AREA FROM 28TH/ 1200 UTC ONWARDS.

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 (1) THE DEEP DEPRESSION OVER NORTH GUJARAT AND ADJOINING SOUTHEAST RAJASTHAN IS LIKELY TO CONTINUE TO MOVE SLOWLY WEST-SOUTHWESTWARDS ACROSS GUJARAT REGION AND REACH SAURASHTRA & KUTCH AND ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA BY 0000 UTC OF 29TH AUGUST.

(M SHARMA)
RSMC NEW DELHI

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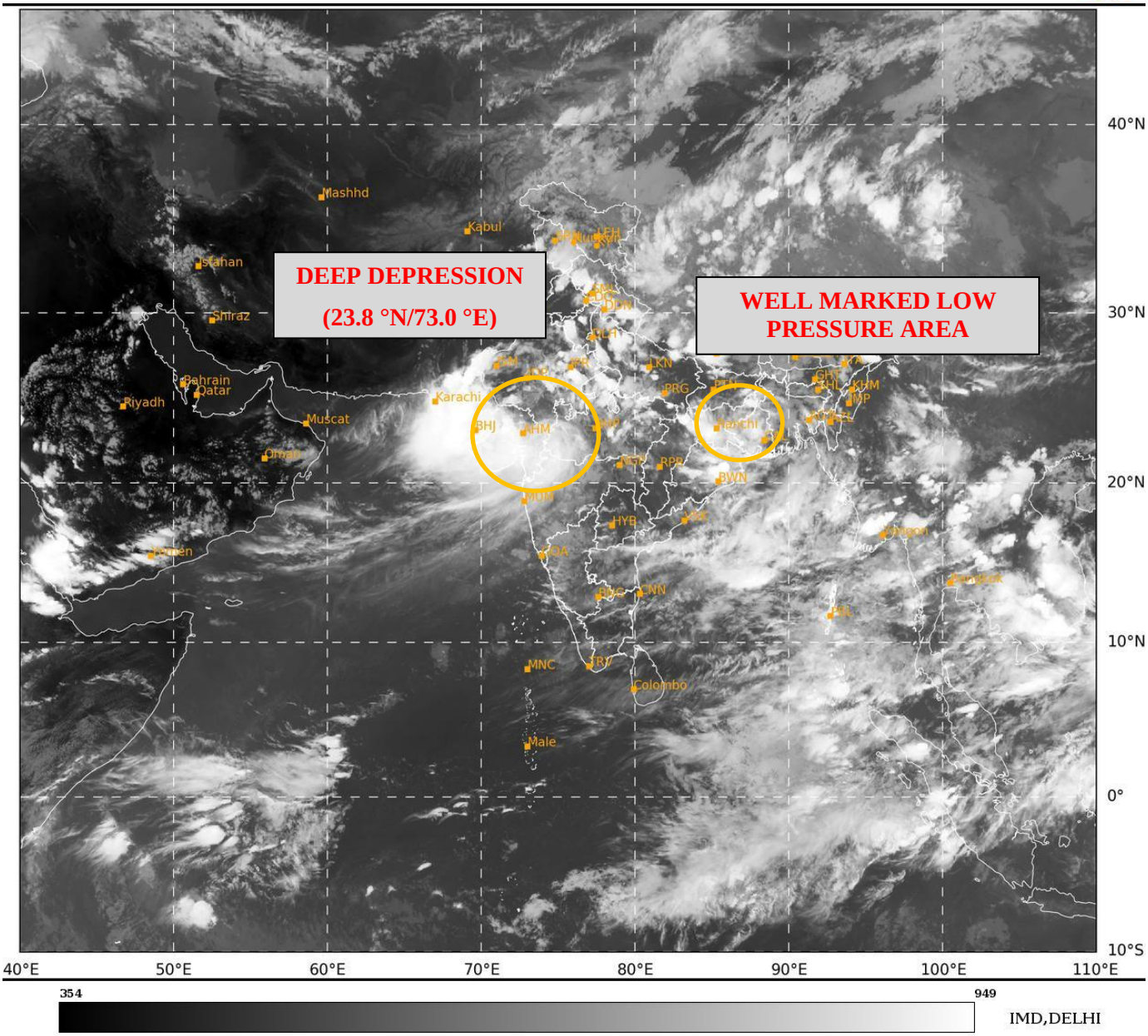
SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

26-08-2024/(1315 to 1342) GMT
26-08-2024/(1845 to 1912) IST



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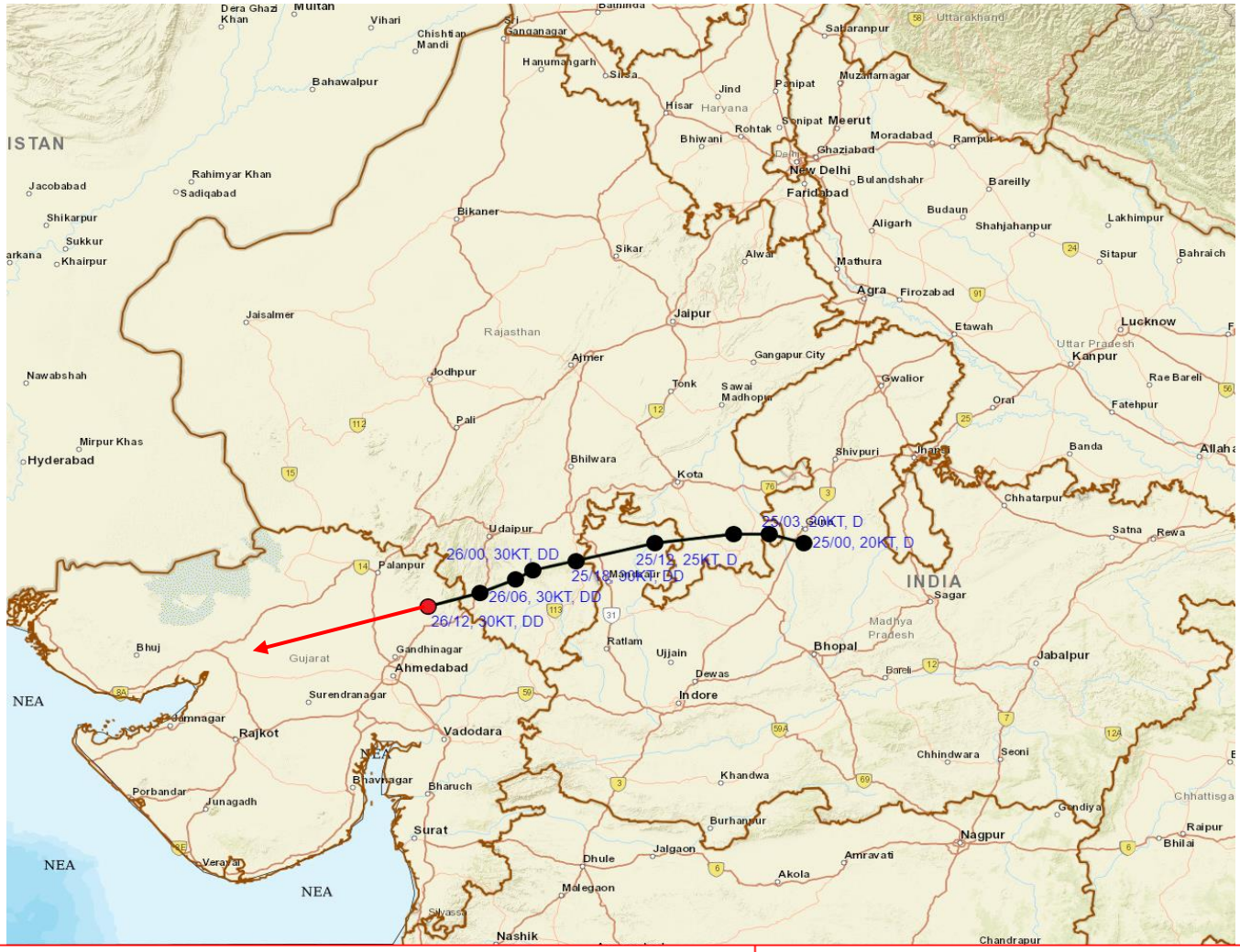
OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTH GUJARAT AND ADJOINING SOUTHEAST RAJASTHAN BASED ON 1200 UTC (1730 IST) OF 26TH AUGUST, 2024.



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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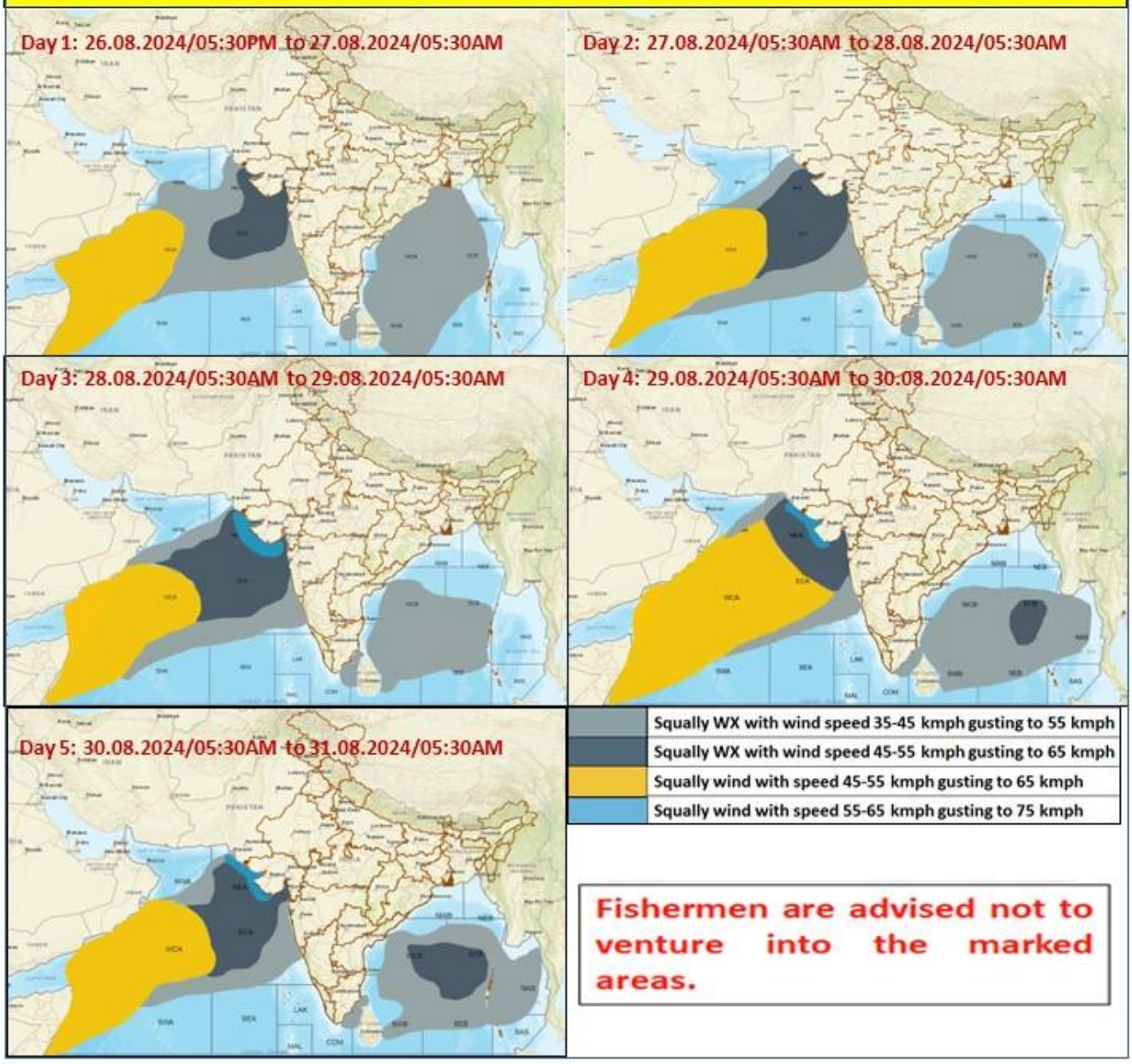
Fishermen Warning Graphics



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