



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 28.08.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0300 UTC OF 28.08.2024 BASED ON 0000 UTC OF 28.08.2024.

LAND DEPRESSION OVER NORTHWEST INDIA:

SUB: (A) DEEP DEPRESSION OVER SAURASHTRA & KACHCHH

THE DEEP DEPRESSION OVER SAURASHTRA & KACHCHH AND ADJOINING NORTH GUJARAT MOVED WESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0000 UTC OF TODAY, THE 28TH AUGUST OVER SAURASHTRA & KACHCHH NEAR LATITUDE 23.7°N AND LONGITUDE 70.0 °E, 50 KM NORTH-NORTHEAST OF BHUJ (42634), 120 KM EAST-NORTHEAST OF NALIYA (42631) AND 320 KM EAST-SOUTHEAST OF KARACHI (41780).

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

INSAT 3DR IMAGERY AT 0000 UTC OF 28TH AUGUST SHOWS SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER KUTCH SAURASHTRA NORTHEAST ARABIAN SEA GULF OF KUTCH (MINIMUM CTT MINUS 93 DEG CEL) AND MODERATE TO INTENSE CONVECTION OVER SOUTH PAKISTAN SOUTHWEST RAJASTHAN EAST GUJARAT REGION GULF OF CAMBAY.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KTS GUSTING TO 40 KTS. ESTIMATED CENTRAL PRESSURE IS 992 HPA. AT 0000 UTC, BHUJ REPORTED MEAN SEA LEVEL PRESSURE OF 992.9 HPA & PRESSURE CHANGE IN 24 HOURS AS -2.1 HPA WITH WIND SPEED OF 3 KT. NALIYA REPORTED MEAN SEA LEVEL PRESSURE OF 994.2 HPA & PRESSURE CHANGE IN 24 HOURS AS -1.9 HPA WITH WIND SPEED 5 KT. DWARKA REPORTED MEAN SEA LEVEL PRESSURE OF 996.7 HPA & NO PRESSURE CHANGE IN 24 HOURS WITH WIND SPEED OF 18 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 28-30TH AUGUST:

- 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 28TH-30TH AUGUST.

- SQUALLY WEATHER WITH ROUGH TO VERY ROUGH SEA CONDITIONS IS VERY LIKELY TO PREVAIL ALONG & OFF GUJARAT & ADJOINING PAKISTAN AND 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 GUJARAT & ADJOINING PAKISTAN AND NORTH MAHARASHTRA COASTS TILL 30TH AUGUST.

CLOUDS ASSOCIATED WITH ARABIAN SEA:

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTHEAST ARABIAN SEA AND GULF OF KUTCH. SCATTERED LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER GULF OF CAMBAY, CENTRAL ARABIAN SEA AND WEAK TO MODERATE CONVECTION OVER NORTHWEST & SOUTH ARABIAN SEA LAKSHADWEEP ISLANDS & COMORIN AREA.

***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
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 NORTHERN PARTS OF CENTRAL MADHYA PRADESH & ADJOINING SOUTH UTTAR PRADESH BECAME LESS MARKED

THE LOW PRESSURE AREA OVER NORTHERN PARTS OF CENTRAL MADHYA PRADESH & ADJOINING SOUTH UTTAR PRADESH BECAME LESS MARKED AT 0530 HOURS IST OF TODAY, THE 28TH AUGUST 2024.

(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 SOUTH ODISHA AND NORTH ANDHRA PRADESH COASTS DURING SUBSEQUENT TWO DAYS.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER BAY OF BENGAL AND SOUTH ANDAMAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER NORTH BAY OF BENGAL, NORTH ANDAMAN SEA, ARAKAN COAST, GULF OF MARTABAN & TENASSERIM COAST.

***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
-	LOW	MOD	MOD	-	-	-

***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 BAY OF BENGAL, 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 IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ AROUND SOUTHWEST OF SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ AROUND SOUTHWEST OF SYSTEM AREA EXTENDING UPTO NORTHEAST ARABIAN SEA. THE WIND SHEAR IS MODERATE (15-20 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 SAURASHTRA & KACHCHH LIKELY TO MOVE WEST-SOUTHWESTWARDS ACROSS SAURASHTRA & KACHCHH. 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 WITH RESPECT TO 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.

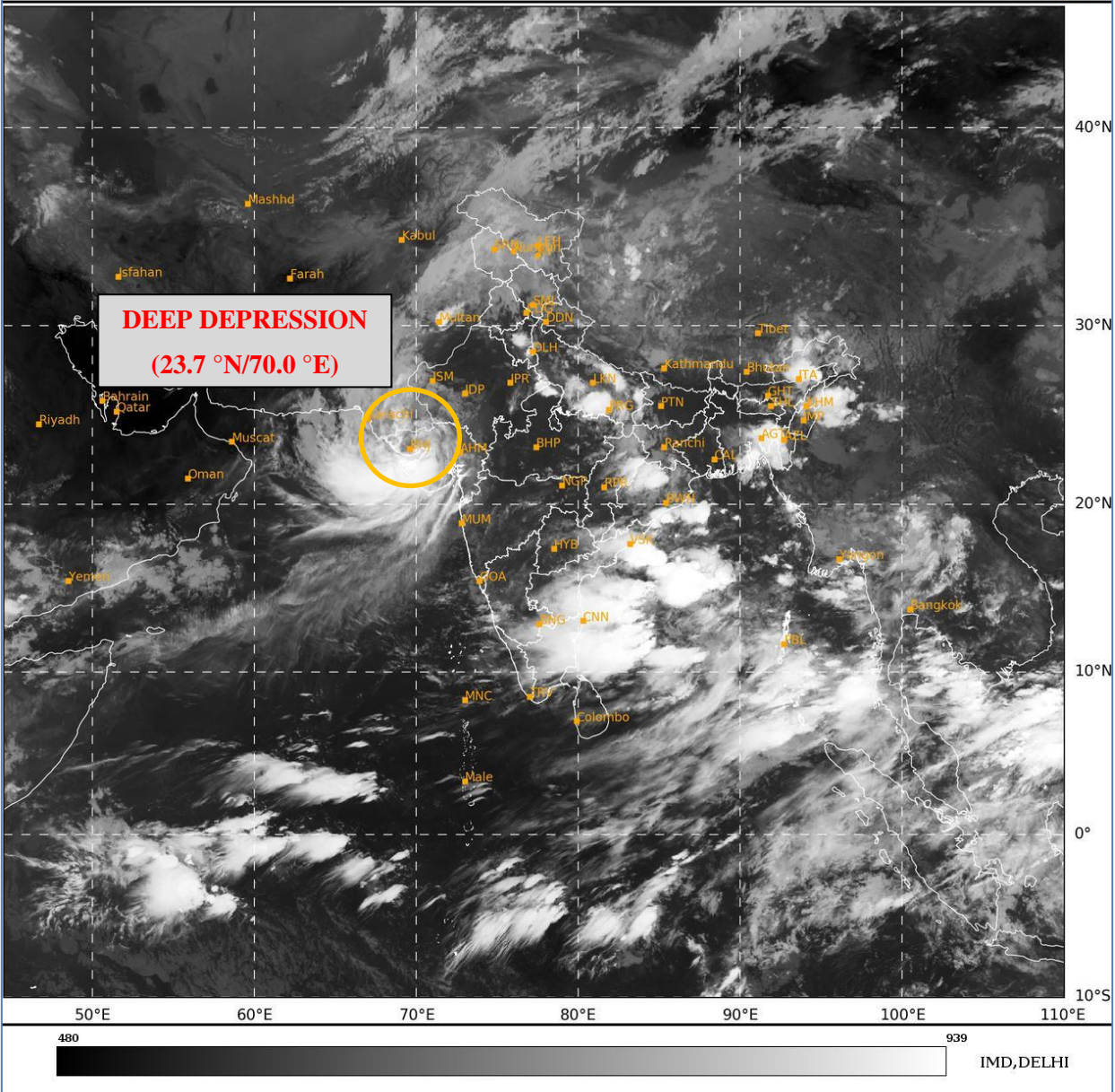
THE LOW PRESSURE AREA OVER NORTHERN PARTS OF CENTRAL MADHYA PRADESH & ADJOINING SOUTH UTTAR PRADESH HAS BECOME LESS MARKED.

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 SAURASHTRA & KACHCHH IS LIKELY TO MOVE SLOWLY WEST-SOUTHWESTWARDS ACROSS SAURASHTRA & KACHCHH REGION AND REACH SAURASHTRA & KACHCHH COAST & ADJOINING AREAS OF PAKISTAN AND NORTHEAST ARABIAN SEA BY 0000 UTC OF 29TH AUGUST.
- (2) 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.

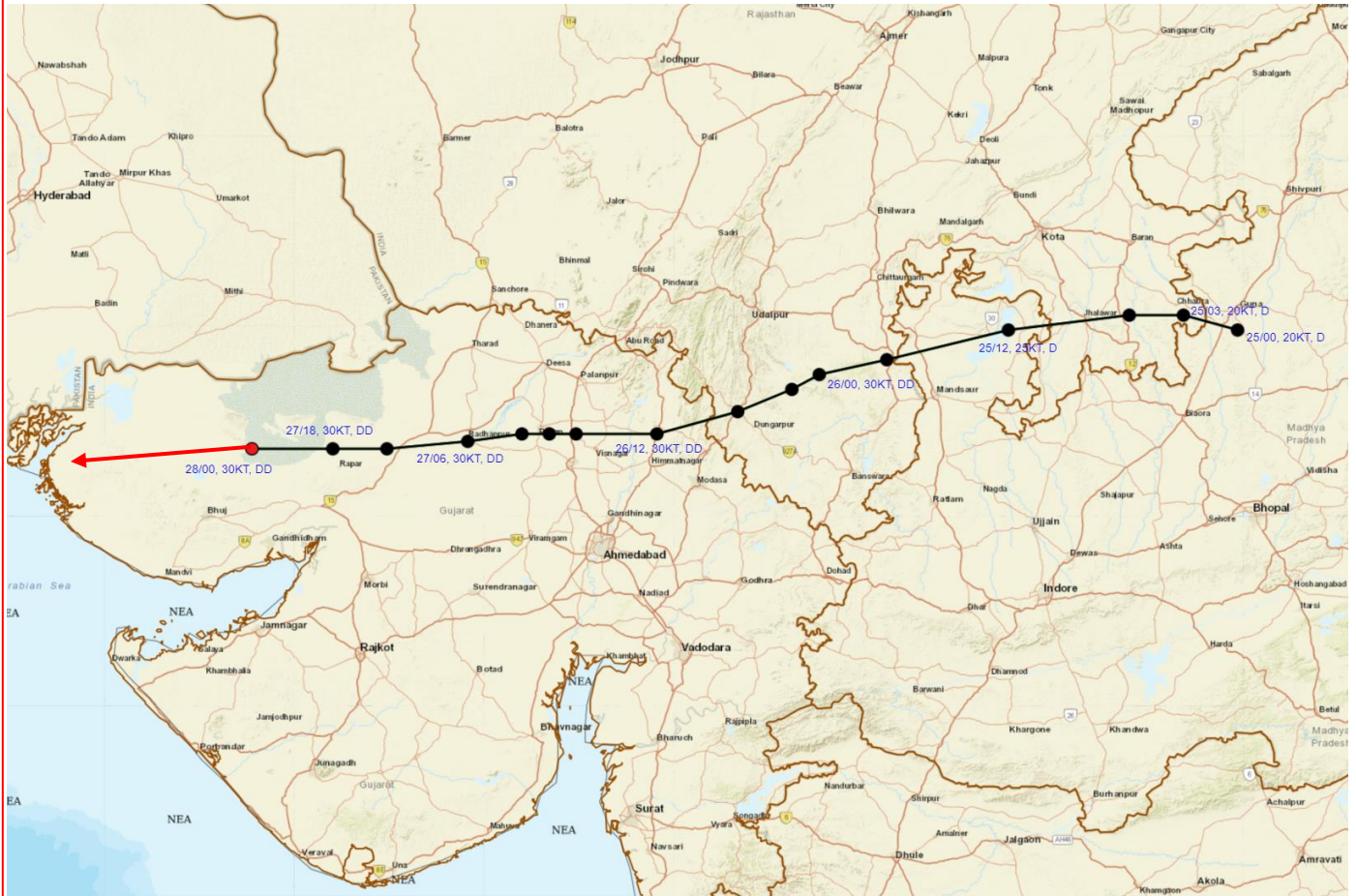
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Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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 SAURASHTRA & KACHCHH BASED ON 0000 UTC (0530 IST) OF 28TH 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 (≥ 20 KT)

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

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