



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.11.2022

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 21.11.2022 BASED ON 1200 UTC OF 21.11.2022.

SUB: DEPRESSION OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 25 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 21ST NOVEMBER, 2022 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL, NEAR LATITUDE 12.9° N AND LONGITUDE 82.0° E, ABOUT 190 KM EAST OF CHENNAI (43279), 280 KM EAST-SOUTHEAST OF NELLORE (43245), 380 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) AND 420 KM NORTH-NORTHEAST OF JAFFNA (43404).

CONTINUING TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-NORTH TAMILNADU-PUDUCHERRY COASTS, THE SYSTEM IS LIKELY TO MAINTAIN THE INTENSITY OF DEPRESSION TILL MID-NIGHT (1800 UTC) OF TODAY, THE 21ST NOVEMBER AND THEREAFTER WEAKEN GRADUALLY INTO A WELL-MARKED LOW PRESSURE AREA AROUND 22ND NOVEMBER MORNING (0000 UTC).

AS PER INSAT 3D IMAGERY, THE INTENSITY OF THE SYSTEM IS CHARACTERISED AS T.1.5. THE SYSTEM SHOWS SHEAR PATTERN WITH CONVECTIVE CLOUD SHEARED TO THE WEST OF SYSTEM CENTRE. THE OUTER RAIN BANDS ARE ENTERING SOUTH ANDHRA PRADESH AND NORTH TAMIL NADU COASTS. HOWEVER, THE INTENSE CLOUD MASS IS STILL OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL OFF SOUTH ANDHRA PRADESH AND NORTH TAMIL NADU COASTS. LAND INTERACTIONS HAVE COMMENCED. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL BETWEEN LAT 11.8N TO 16.5N AND LONG 80.0E TO 85.0E & NORTHEAST TAMILNADU & COASTAL ANDHRA PRADESH. MINIMUM CLOUD TOP TEMPERATURE IS -93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1003 HPA. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL. AT 1200 UTC OF TODAY, THE COASTAL STATIONS OF SOUTH ANDHRA PRADESH & NORTH TAMIL NADU ARE REPORTING RISE IN PRESSURE (ABOUT 0.5-1.0 HPA) DURING PAST 24 HOURS INDICATING FILLING TENDENCY OF THE SYSTEM. HOWEVER, THE RISE IS MINIMUM OVER CHENNAI AND NELLORE INDICATING THE WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS BETWEEN CHENNAI AND NELLORE. PRESSURE DEPARTURE OF ABOUT -4.0 TO -5.0 HPA

AGAINST NORMAL IS REPORTED OVER SOUTH ANDHRA PRADESH AND NORTH TAMILNADU COASTS.

REMARKS:

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 6 WITH AMPLITUDE GREATER THAN 1. HENCE MJO WOULD NOT SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL. THERE IS ALSO NO SUPPORT OF EQUATORIAL WAVES OVER THE REGION FOR FURTHER INTENSIFICATION OF THE SYSTEM. SEA SURFACE TEMPERATURE (SST) IS AROUND 28-29°C OVER SOUTHWEST BOB.

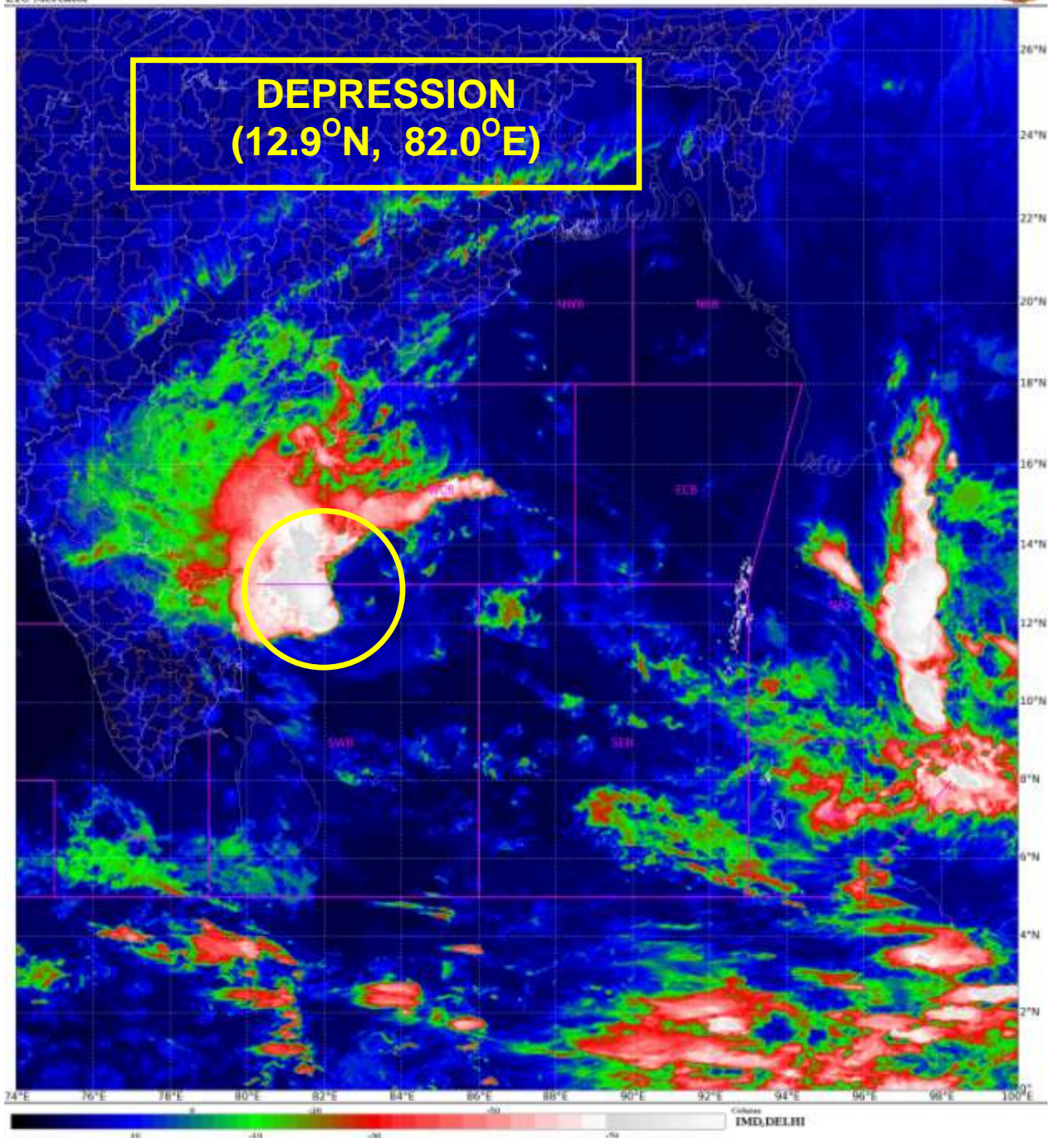
LOW LEVEL RELATIVE VORTICITY IS ABOUT $100 \times 10^{-6} \text{S}^{-1}$ TO THE SOUTH-SOUTHEAST OF SYSTEM CENTER. IT IS EAST-WEST ORIENTED, SUPPORTING WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM FROM 1200 UTC ONWARDS. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS $20 \times 10^{-5} \text{S}^{-1}$ AROUND SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS $30 \times 10^{-5} \text{S}^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTER AND ALONG THE EXPECTED DIRECTION OF MOVEMENT. TOTAL PRECIPITABLE WATER IMAGERY AT 1300 UTC OF 21ST IS INDICATING DECREASE IN WARM MOIST AIR ADVECTION INTO THE CORE OF SYSTEM FROM NORTHEAST SECTOR. IT IS ALSO INDICATING DRY COLD AIR ADVECTION FROM SOUTHERN PENINSULAR REGION INTO THE SOUTHWEST & ADJOINING SOUTHEAST SECTOR OF SYSTEM. IN VIEW OF LAND INTERACTIONS, MODERATE TO HIGH WIND SHEAR NEAR THE COAST AND DRY-COLD AIR ADVECTION INTO THE SYSTEM, IT IS LIKELY TO START WEAKENING FROM 22ND NOVEMBER MORNING.

UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 18°N OVER BAY OF BENGAL. HOWEVER, THE SYSTEM IS BEING SHEARED WEST-NORTHWESTERLY UNDER MID-TROPOSPHERIC EAST-SOUTHEASTERLY WINDS. THE VORTICITY ADVECTION FIELD IS ALSO SUPPORTING WEST-NORTHWESTWARDS/ WESTWARDS MOVEMENT FROM 21ST EVENING (1200 UTC).

MOST OF THE MODELS ARE INDICATING THAT THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-TAMIL NADU COASTS AND WEAKEN GRADUALLY BY 22ND MORNING (0000 UTC).

IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT CONTINUING TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-NORTH TAMILNADU-PUDUCHERRY COASTS, THE SYSTEM IS LIKELY TO MAINTAIN THE INTENSITY OF DEPRESSION TILL MID-NIGHT (1800 UTC) OF TODAY, THE 21ST NOVEMBER AND THEREAFTER WEAKEN GRADUALLY INTO A WELL-MARKED LOW PRESSURE AREA AROUND 22ND MORNING (0000 UTC).

(M SHARMA)
RSMC NEW DELHI



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 DEPRESSION OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 21ST NOVEMBER, 2022



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

Fishermen warning graphics



	Squally weather with wind speed 40-45 kmph gusting to 55 kmph
	Squally wind speed with wind speed 45-55 kmph gusting to 65 kmph
<p style="color: red; font-weight: bold; font-size: 18px;">Fishermen are advised not to venture into the marked areas.</p>	

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