



**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 0700 UTC OF 21.11.2022 BASED ON 0300 UTC OF 21.11.2022.

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 21ST NOVEMBER, 2022 OVER THE SAME REGION, NEAR LATITUDE 12.1° N AND LONGITUDE 84.0° E, ABOUT 520 KM NORTHEAST OF JAFFNA (43404), 470 KM EAST-NORTHEAST OF KARAIKAL (43346), 550 KM SOUTHEAST OF MACHILIPATNAM (43185) AND 420 KM EAST-SOUTHEAST OF CHENNAI (43279).

IT IS LIKELY TO MOVE NORTHWESTWARDS TILL 21ST NOVEMBER EVENING (1200 UTC) AND THEN WEST-NORTHWESTWARDS MAINTAINING THE INTENSITY OF DEPRESSION TILL MID-NIGHT (1800 UTC). THEREAFTER, IT WOULD CONTINUE TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-NORTH TAMILNADU-PUDUCHERRY COASTS AND WEAKEN GRADUALLY INTO A WELL-MARKED LOW PRESSURE AREA AROUND 22ND 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 HWEST OF SYSTEM CENTRE. IN ASSOCIATION WITH THE SYSTEM, ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BET LAT 11.0N TO 19.5N AND LONG 80.0E TO 88.0E & COASTAL ANDHRA PRADESH. MINIMUM CLOUD TOP TEMPERATURE IS -90°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. A FALL OF ABOUT 1.5-2.0 HPA PRESSURE IS RECORDED DURING PAST 24 HOURS OVER SOUTH ANNDHRA PRADESH-NORTH TAMIL NADU REGION. LOWEST PRESSURE FALL OF -2.0 HPA IS REPORTED AT NELLORE (SOUTH COASTAL ANDHRA PRADESH) AT 0300 UTC. CHENNAI REPORTED PRESSURE FALL OF -1.3 HPA PRESSURE DEPARTURE OF ABOUT -2.0 TO -3.0 HPA AGAINST NORMAL IS REPORTED OVER SOUTH ANDHRA PRADESH COAST AND ABOUT -1.5 TO -2.5 HPA OVER NORTH TAMILNADU COAST.

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 50-100 $\times 10^{-6} \text{s}^{-1}$ AROUND THE SYSTEM CENTER. IT IS EAST-WEST ORIENTED, INDICATING MORE WESTERLY COMPONENT IN THE MOVEMENT, THUS GRADUAL WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM THEREAFTER. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS AROUND 20 $\times 10^{-5} \text{s}^{-1}$ TO THE WEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED AND IS AROUND 10-20 $\times 10^{-5} \text{s}^{-1}$ TO THE NORTH OF SYSTEM CENTRE. WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTER AND ALONG THE EXPECTED DIRECTION OF MOVEMENT. TOTAL PRECIPITABLE WATER IMAGERY INDICATES THAT WARM MOIST AIR ADVECTION IS CONTINUING INTO THE CORE OF SYSTEM CENTER. IT WOULD CONTINUE TILL 0000 UTC OF 22ND NOVEMBER AND DECREASE THEREAFTER. THERE IS COLD AIR INTRUSION INTO THE SOUTHWEST SECTOR OF THE SYSTEM. HOWEVER, IT IS NOT REACHING TO THE CORE OF THE SYSTEM CURRENTLY, AS THE SYSTEM WOULD MOVE CLOSE TO THE COAST, THE DRY AIR INCURSION FROM SOUTHERN PENINSULAR REGION WOULD INCREASE.

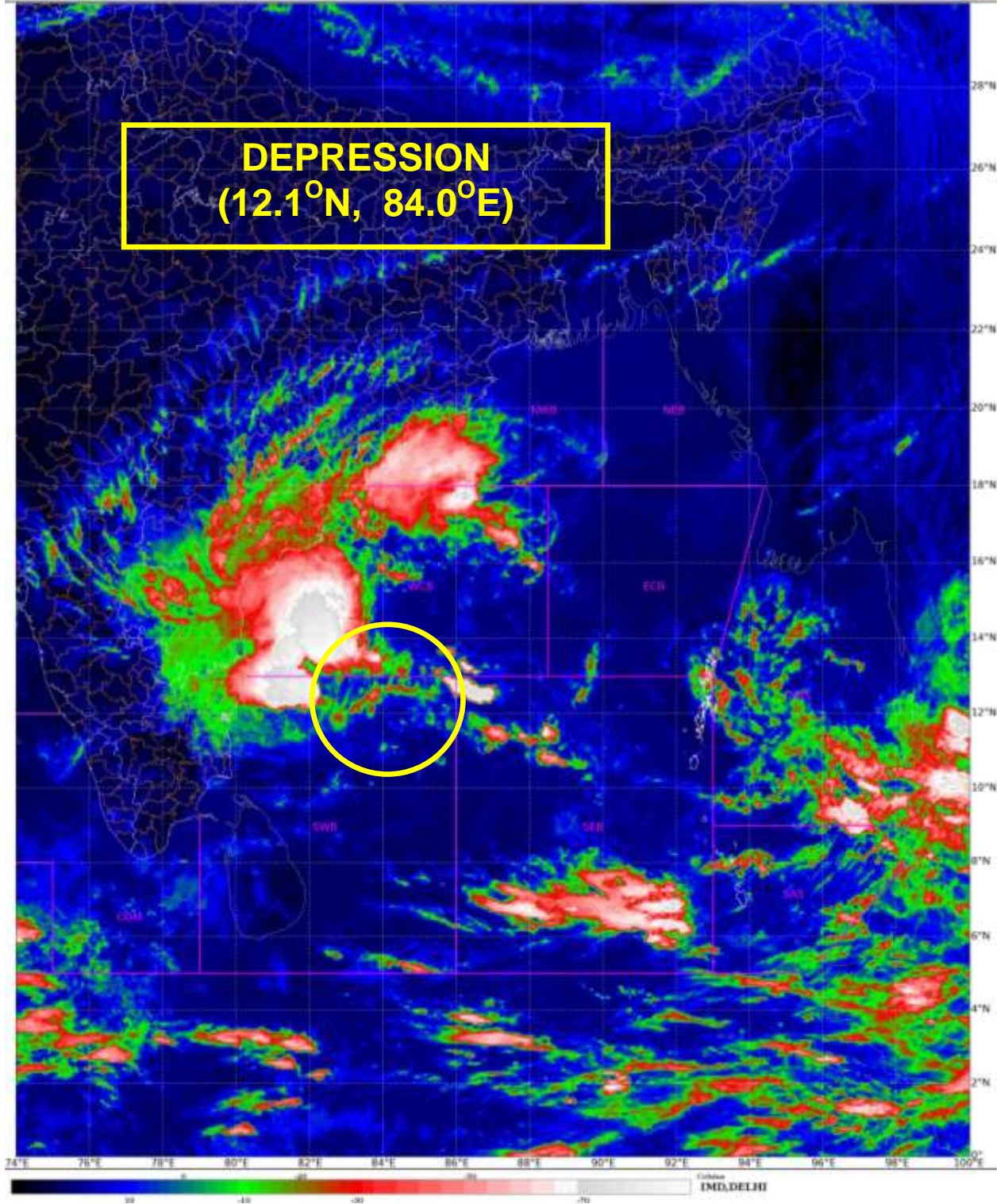
CONSIDERING ALL THESE, THE SYSTEM WOULD MAINTAIN ITS INTENSITY OF DEPRESSION TILL 0000 UTC OF 22ND NOVEMBER. THEREAFTER WEAKEN GRADUALLY WHILE MOVING TOWARDS THE COAST DUE TO LAND INTRUCTIONS AND COLD & DRY AIR INCURSION FROM SOUTH PENINSULAR INDIA.

UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 18°N OVER BAY OF BENGAL AND THE SYSTEM IS UNDER MID-TROPOSPHERIC SOUTHEASTERLY WINDS WHICH WOULD STEER THE SYSTEM TOWARDS NORTHWEST TILL 1200 UTC OF 21ST NOVEMBER. THEREAFTER THE SOUTH-SOUTHEASTERLY STEERING WINDS ARE LIKELY TO STEER THE SYSTEM WEST-NORTHWESTWARDS. THE VORTICITY ADVECTION FIELD IS ALSO SUPPORTING WEST-NORTHWESTWARDS MOVEMENT FROM 21ST EVENING (1200 UTC).

MOST OF THE MODELS ARE INDICATING, NO FURTHER INTENSIFICATION OF THE SYSTEM. THE MODELS ARE ALSO INDICATING GRADUAL NORTHWESTWARD MOVEMENT TILL 1200 UTC OF 21ST NOVEMBER AND WEST-NORTHWESTWARDS MOVEMENT THEREAFTER.

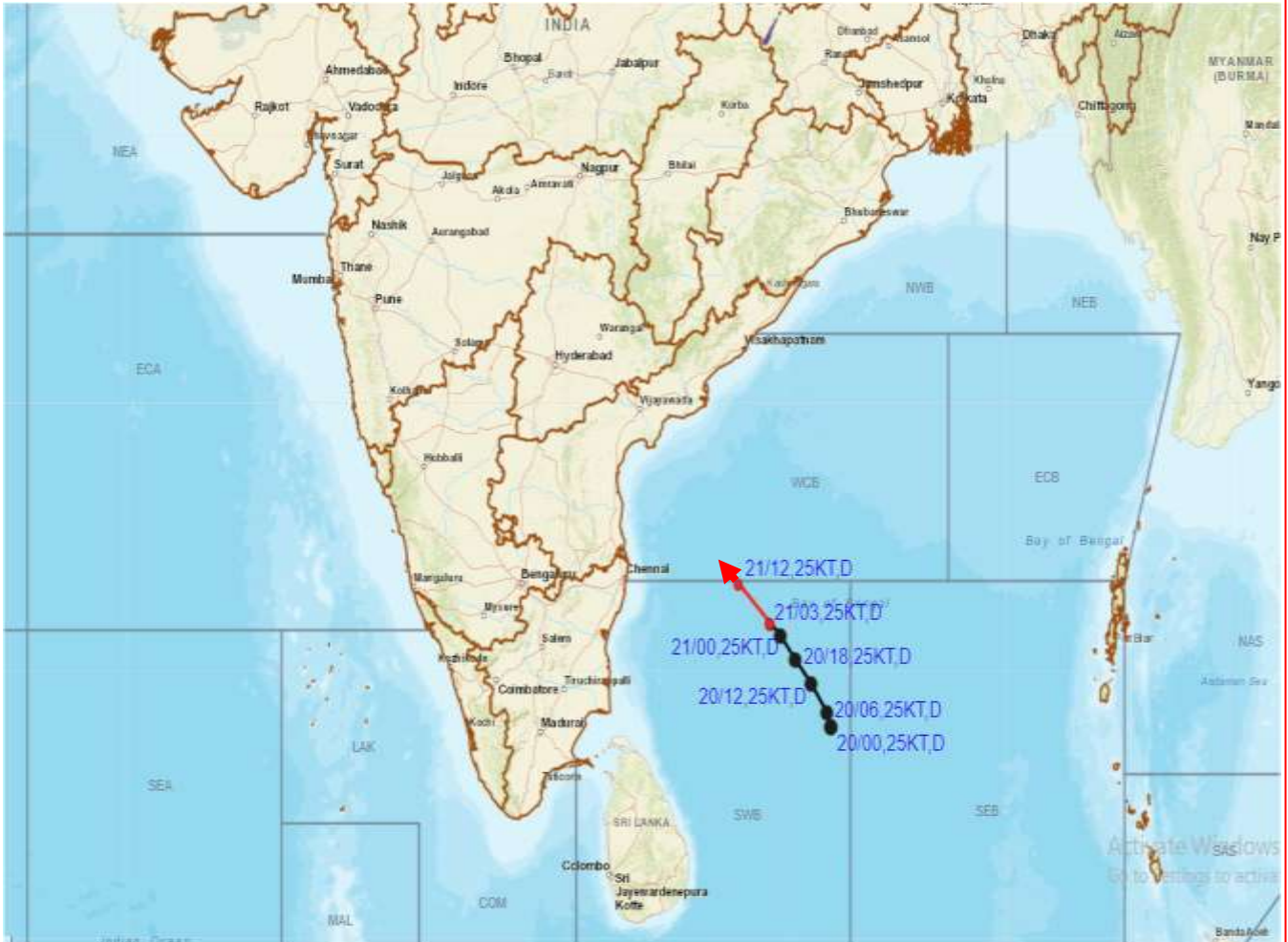
IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 21ST NOVEMBER AND THEN WEST-NORTHWESTWARDS MAINTAINING THE INTENSITY OF DEPRESSION TILL MID-NIGHT (1800 UTC). THEREAFTER, IT WOULD CONTINUE TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-NORTH TAMILNADU-PUDUCHERRY COASTS AND WEAKEN GRADUALLY INTO A WELL-MARKED LOW PRESSURE AREA AROUND 22ND MORNING (0000 UTC).

(M SHARMA)
RSMC NEW DELHI





OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 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

Fishermen are advised not to venture into the marked areas.

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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