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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.11.2022

MODIFIED SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0500 UTC OF 21.11.2022 BASED ON 0000 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 0000 HOURS UTC OF TODAY, THE 21ST NOVEMBER, 2022 OVER THE SOUTHWEST BAY OF BENGAL, NEAR LATITUDE 11.9° N AND LONGITUDE 84.2^{O} E, ABOUT 520 KM EAST-NORTHEAST OF JAFFNA (43404), 490 KM EAST-NORTHEAST OF KARAIKAL(43346), 580 KM SOUTHEAST OF MACHILIPATNAM(43185) AND 450 KM EAST-SOUTHEAST OF CHENNAI(43279).

IT IS LIKELY TO MOVE NORTHWESTWARDS AND MAINTAIN ITS INTENSITY OF DEPRESSION TODAY, THE 21ST NOV. THEREAFTER, IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ANDHRA PRADESH-NORTH TAMILNADU-PUDUCHERRY COASTS AND WEAKEN GRADUALLY INTO A WELL MARKED LOW PRESSURE AREA AROUND 0000 UTC OF 22ND NOVEMBER.

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 NORTHWEST OF SYSTEM CENTRE. IN ASSSOCIATION WITH THE SYSTEM, ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BET LAT 10.0N TO 18.0N AND LONG 80.0E TO 87.0E & COASTAL ANDHRA PRADESH. MINIMUM CLOUD TOP TEMPERATURE IS -93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHWEST AND ADJOINING WEST CENTRAL & SOUTHEAST BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 1003 HPA.

REMARKS:

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 6 WITH AMPLITUDE GREATER THAN 1. THERE IS 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 EAST-WEST ORIENTED AND IS ABOUT 100 X10^{-6}S^{-1} OVER THE SYSTEM CENTER. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL, TILTING SOUTHWESTWARDS WITH HEIGHT. LOW LEVEL CONVERGENCE IS AROUND 20 X10^{-5}S^{-1} TO THE WEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND 40 X10^{-5}S^{-1} TO

THE NORTHWEST OF SYSTEM CENTRE. BOTH LOW LEVEL CONVERGENCE AND UPPER LEVEL DIVERGENCE ARE MOSTLY ALLIGNED OVER THE REGION. WIND SHEAR IS LOW (15-20 KNOTS) AROUND THE SYSTEM CENTER AND ACROSS SOUTH ANDHRA PRADESH, SOUTH KARNATAKA AND NORTH TAMILNADU. IT IS MODERATE TO HIGH OTHERWISE. THERE IS WARM AIR ADVECTION TOWARDS THE SYSTEM CENTER AS EVIDENT FROM TOTAL PRECIPITABLE WATER IMAGERY. IT WOULD CONTINUE TILL 0000 UTC OF 22ND NOVEMBER AND DECREASE THEREAFTER. CONSIDERING ALL THIS, THE SYSTEM WOULD MAINTAIN ITS INTENSITY OF DEPRESSION TILL 0000 UTC OF 22ND NOVEMBER. THEERAFTER IT IS LIKELY TO WEAKEN GRADUALLY WHILE MOVING TOWARDS THE COAST DUE TO LAND INETRACTION 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-TRPOSPHERIC SOUTHEASTERLY WINDS WHICH WOULD STEER THE SYSTEM TOWARDS NORTHWEST TILL 0000 UTC OF 22ND NOVEMBER. THEREAFTER THE SOUTHEASTERLY STREEING WINDS ARE LIKELY TO CHANGE TO EASTERLY/EAST-SOUTHEASTERLY LEADING TO WESTWARD TO WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM.

MOST OF THE MODELS ARE INDICATING, NO FURTHER INTENSIFICATION OF THE SYSTEM. THE MODELS ARE ALSO INDICATING GRADUAL NORTHWESTWARD MOVEMENT TILL 0000 UTC OF 22ND NOVEMBER.

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

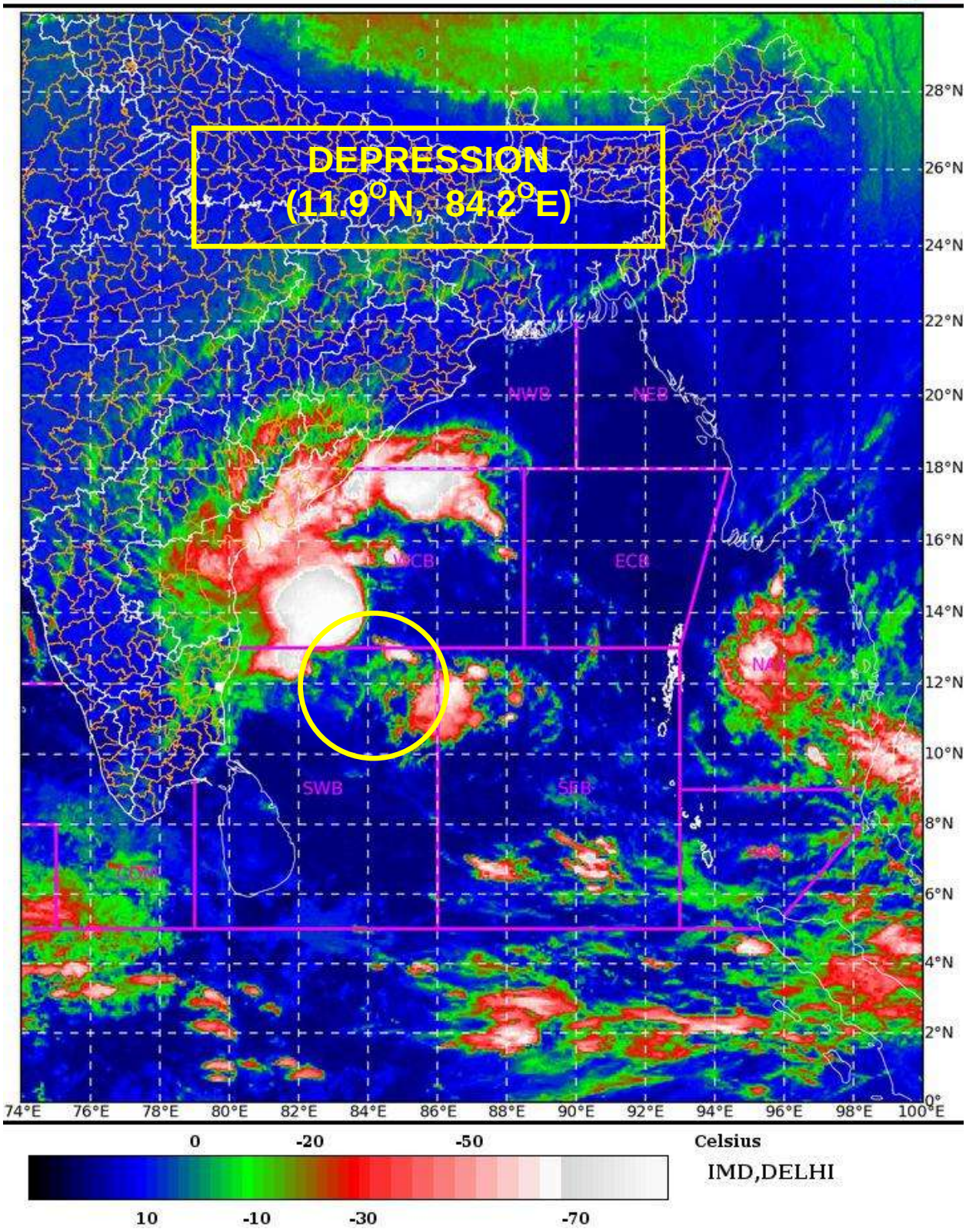
(R K JENAMANI)
RSMC NEW DELHI

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

SAT : INSAT-3D IMG 21-11-2022/(0100 to 0126) GMT

IMG_TIR1_TEMP 10.8 um 21-11-2022/(0630 to 0656) IST

L1C Mercator



Celsius

IMD,DELHI

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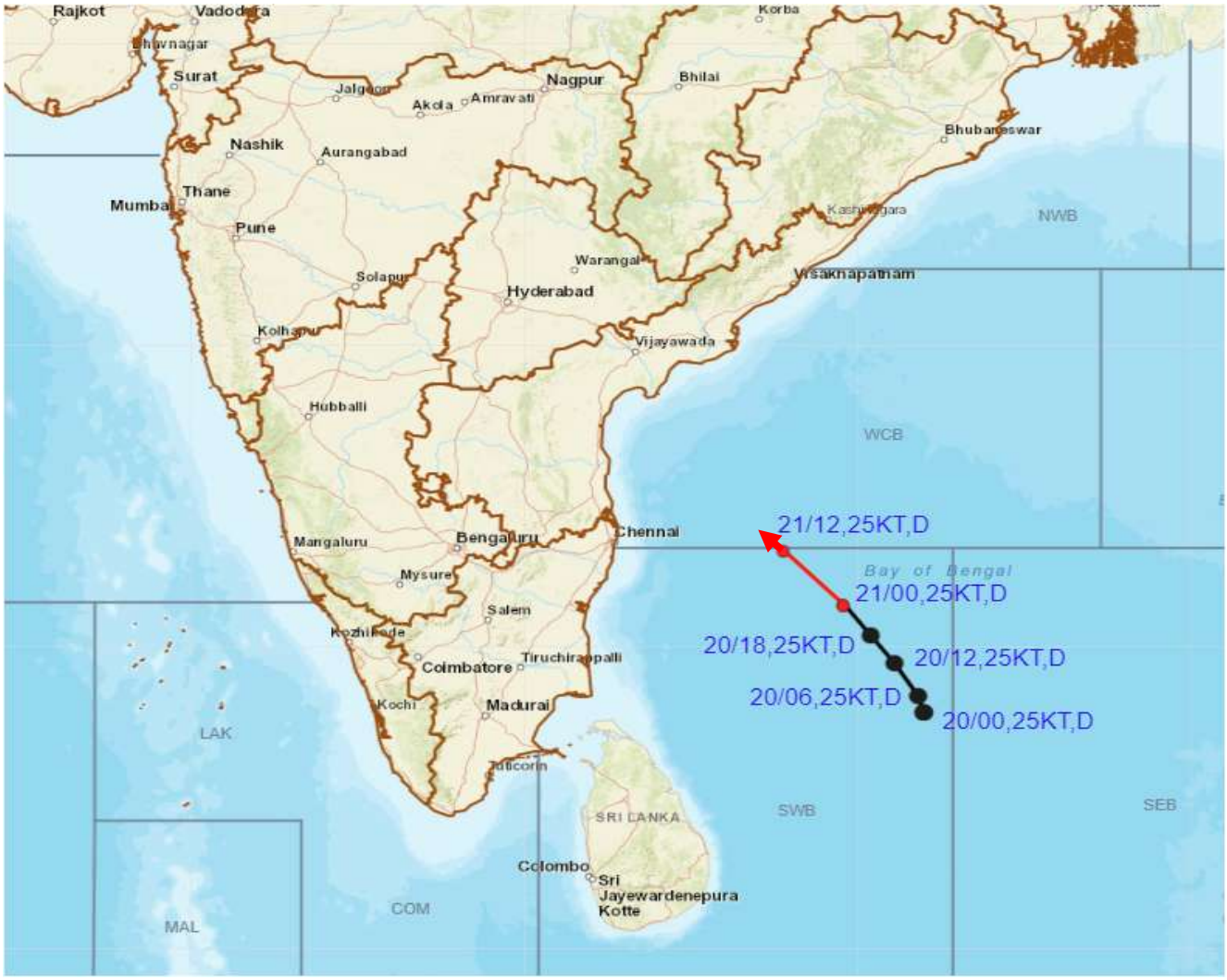
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC OF 21ST NOVEMBER, 2022



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

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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.

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