



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 11.11.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 11.11.2021 BASED ON 0000 UTC OF 11.11.2021.

(A) DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL (BOB) MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 21 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0000 UTC OF 11TH NOVEMBER 2021, OVER SOUTHWEST BAY OF BENGAL, NEAR LAT. 12.0°N AND LONG. 81.4°E, ABOUT 170 KM EAST-SOUTHEAST OF CHENNAI (43279) & 170 KM EAST OF PUDUCHERRY (43331). IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU & ADJOINING SOUTH ANDHRA PRADESH COASTS AROUND CHENNAI (43279) BY THE EVENING (AROUND 1200 UTC) OF 11TH NOVEMBER 2021.

AS PER INSAT 3D IMAGERY AT 0000UTC, BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST & ADJOINING WESTCENTRAL BOB BETWEEN LATITUDE 11.0N & 18.0N, LONGITUDE 80.0E & 89.0E, OVER NORTH TAMIL NADU, COASTAL ANDHRA PRADESH AND RAYALASEEMA. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELCIUS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
11.11.21/0000	12.0/81.4	45-55 GUSTING TO 65	DEPRESSION
11.11.21/1200	12.9/80.3	45-55 GUSTING TO 65	DEPRESSION
12.11.21/0000	13.6/79.2	40-50 GUSTING TO 60	DEPRESSION

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA. THE WINDS ARE STRONGER IN NORTHEAST SECTOR UNDER THE INFLUENCE OF ACTIVE NORTHEAST MONSOON CONDITIONS.

AT 0000 UTC, A BUOY LOCATED NEAR 13.4°N/84.1°E REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 1003.6 HPA AND MAXIMUM SUSTAINED WIND SPEED (MSW) OF 14KT/147°. ANOTHER BUOY LOCATED NEAR 13.9°N/87.0°E REPORTED MSLP OF 1006.2 HPA AND MSW OF 21KT/139°. THERE IS A FALL OF MSLP BY ABOUT 4-5 HPA OVER NORTH TAMILNADU COAST WITH P24= -4.9 HPA AT NAGAPATTINAM, -5.1 HPA AT PUDUCHERRY AND -5.7 AT CHENNAI AT 0000 UTC.

REMARKS:

SEA SURFACE TEMPERATURE (SST) IS ABOUT 29-30°C OVER SOUTHWEST & ADJOINING WESTCENTRAL BOB. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-100 KJ/CM² OVER THE SYSTEM REGION.

POSITIVE LOW LEVEL VORTICITY HAS INCREASED AND IS ABOUT (150 X10⁻⁶ S⁻¹)

AROUND THE SYSTEM CENTRE AND IS ORIENTED SLIGHTLY TO THE WEST WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL AND CONVERGENCE ALSO HAS INCREASED AND IS AROUND $50 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHWEST OF SYSTEM CENTRE. HOWEVER, THE POSITIVE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS AROUND $30 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHWEST OF SYSTEM CENTRE. WARM MOIST AIR INCURSION IS SEEN INTO THE CORE OF SYSTEM AS PER TOTAL PRECIPITABLE WATER IMAGERY. WIND SHEAR IS LOW TO MODERATE (10-20 KTS) OVER THE SYSTEM REGION AND CONTINUES TO REMAIN HIGH (>30 KT) NEAR TAMILNADU-ANDHRA PRADESH COASTS. THIS HIGH VERTICAL WIND SHEAR WILL OFF-SET THE FAVOURABLE OTHER ENVIRONMENTAL CONDITIONS AND HENCE THE DEPRESSION IS NOT LIKELY TO INTENSIFY FURTHER. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 18°N OVER BOB. HENCE, THE SYSTEM IS STEERED WEST-NORTHWESTWARDS UNDER THE INFLUENCE OF EAST-SOUTHEASTERLY WINDS PREVAILING IN THE UPPER TROPOSPHERIC LEVEL.

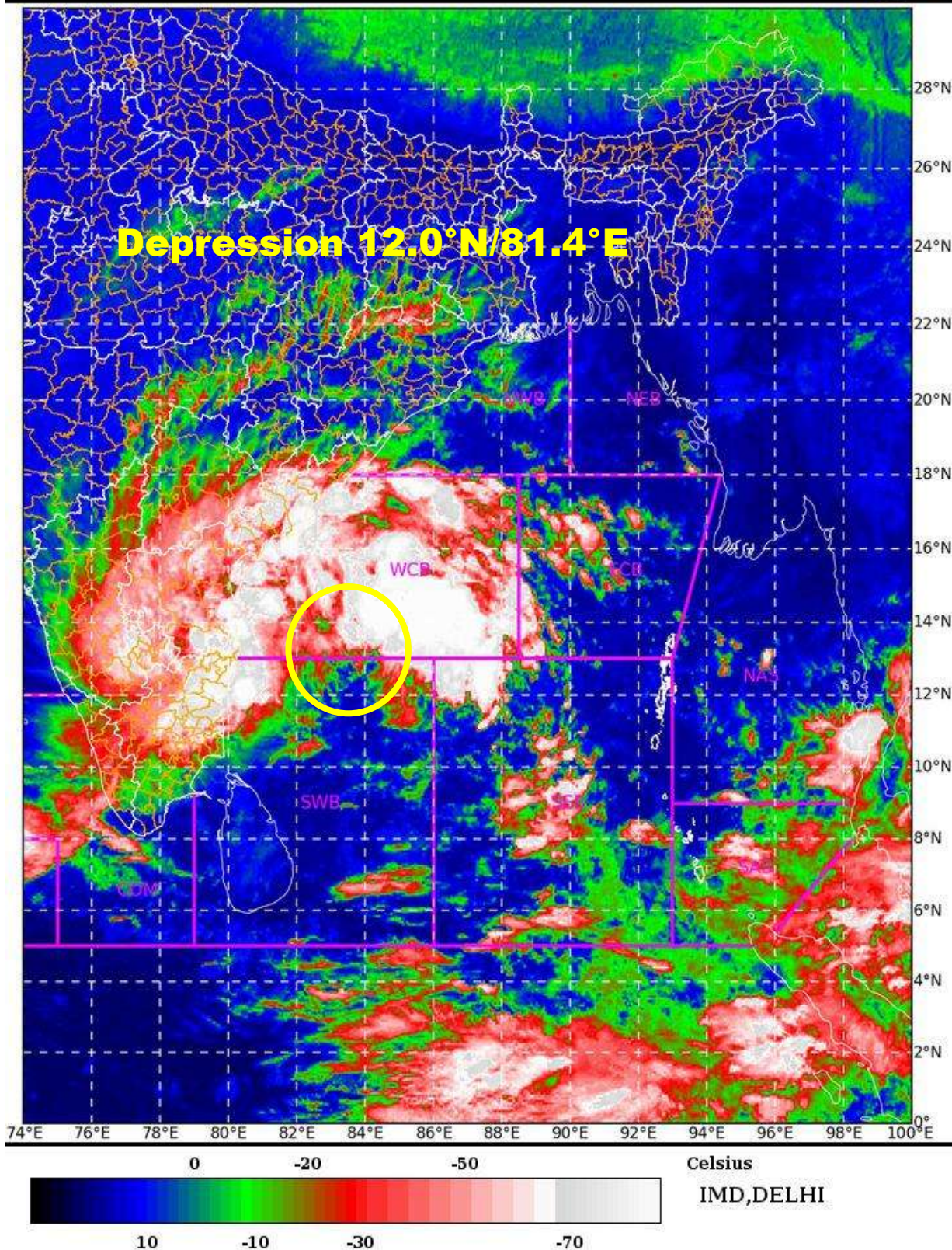
MOST OF THE MODELS INCLUDING ECMWF, NCEP GFS AND NCUM ARE INDICATING NO FURTHER INTENSIFICATION OF SYSTEM. MODELS ARE ALSO INDICATING THAT THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU & ADJOINING SOUTH ANDHRA PRADESH COASTS AROUND 1200 UTC OF 11TH. HOWEVER, THERE IS DIVERGENCE IN MODEL GUIDANCE WITH RESPECT TO TRACK, AS ECMWF & NCUM MODELS ARE SUGGESTING MORE NORTHWARD COMPONENT AS COMPARED TO GFS GROUP OF MODELS. AS A RESULT THERE IS DIFFERENCE IN MODEL GUIDANCE FOR LANDFALL POINT. THE FINAL TRACK FORECAST IS BASED ON THE MULTI MODEL CONSENSUS FORECAST.

HENCE, THE DEPRESSION OVER SOUTHWEST BOB WOULD MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU & ADJOINING SOUTH ANDHRA PRADESH COASTS AROUND CHENNAI (43279) BY THE EVENING (1200 UTC) OF 11TH NOVEMBER 2021.

(B) LIKELY FORMATION OF FRESH LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND NEIGHBOURHOOD

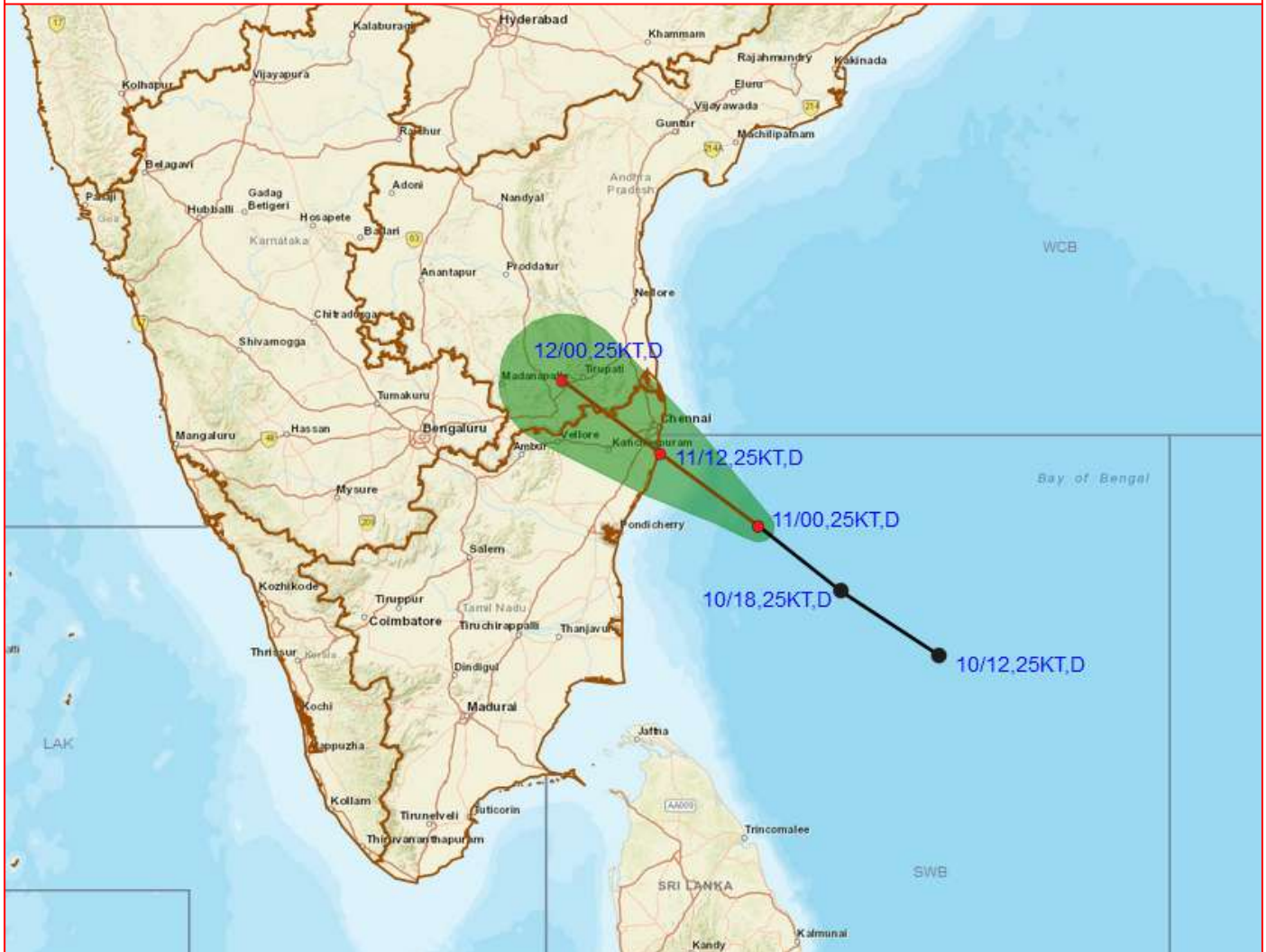
A FRESH LOW PRESSURE AREA IS LIKELY TO FORM OVER SOUTH ANDAMAN SEA AND NEIGHBOURHOOD AROUND 13TH NOVEMBER. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND BECOME MORE MARKED DURING SUBSEQUENT 48 HOURS.

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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC OF 11TH NOVEMBER, 2021



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