



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

**DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 18.11.2021**

**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 18.11.2021 BASED ON 0300 UTC OF 18.11.2021.**

**BAY OF BENGAL:**

**SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL**

YESTERDAY'S LOW PRESSURE AREA (LPA) OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL (BOB) MOVED WEST-NORTHWESTWARDS AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER SOUTHWEST & ADJOINING WESTCENTRAL BOB OFF NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS AT 0000 UTC OF TODAY THE 18<sup>TH</sup> NOVEMBER, 2021. CONTINUING TO MOVE FURTHER WEST-NORTHWESTWARDS, IT CONCENTRATED INTO A DEPRESSION OVER SOUTHWEST BOB AND LAY CENTRED AT 0300 UTC OF TODAY, THE 18<sup>TH</sup> NOVEMBER 2021, OVER SOUTHWEST BAY OF BENGAL OFF NORTH TAMIL NADU COAST, NEAR LAT. 11.0°N AND LONG. 82.3°E, ABOUT 310 KM SOUTHEAST OF CHENNAI (43279), 290 KM EAST-SOUTHEAST OF PUDUCHERRY (43331) AND 270 KM EAST-NORTHEAST OF KARAIKAL (43346). IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMILNADU & ADJOINING SOUTH ANDHRA PRADESH COASTS AROUND CHENNAI BY THE EARLY MORNING (AROUND 0000 UTC) OF TOMORROW, THE 19<sup>TH</sup> NOVEMBER, 2021.

AS PER SATELLITE IMAGERY AT 0300 UTC, THE INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. THE CLOUD MASS OVER SOUTHWEST BOB AND NEIGHBOURHOOD ORGANISED DURING PAST 6 HOURS. INTENSE CONVECTIVE CLOUD MASS IS SHEARED TO THE WEST OF SYSTEM CENTRE. THE WESTERN PART OF THE CONVECTIVE CLOUD MASS HAS ENTERED NORTHEAST TAMILNADU & A SECONDARY CLOUD BAND IS OBSERVED OVER ANDHRA PRADESH. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST AND ADJOINING WESTCENTRAL BOB BETWEEN BET LATITUDE 9.0N & 13.5N AND WEST OF LONGITUDE 82.5E, OVER TAMILNADU & ADJOINING SOUTH ANDHRA PRADESH & PALK STRAIT. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93<sup>0</sup>C AT 0300 UTC.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA.

**REMARKS:**

SEA SURFACE TEMPERATURE (SST) IS ABOUT 29-31°C OVER SOUTHEAST BOB. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-100 KJ/CM<sup>2</sup> OVER SOUTHWEST BOB. MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 4 WITH AMPLITUDE CLOSE TO 1. IT WILL CONTINUE IN SAME PHASE DURING NEXT 5 DAYS. THE POSITIVE LOW LEVEL VORTICITY HAS INCREASED DURING PAST 24 HOURS AND IS AROUND (100 X10<sup>-6</sup> S<sup>-1</sup>) OVER SOUTHWEST BOB TO THE SOUTH OF SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL

CONVERGENCE HAS INCREASED AND IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE HAS ALSO INCREASED SIGNIFICANTLY AND IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (10-15 KTS) OVER SYSTEM AREA AND UPTO NORTH TAMILNADU & ADJOINING SOUTH ANDHRA PRADESH COASTS. LATEST TOTAL PRECIPITABLE WATER VAPOUR IMAGERY IS INDICATING MOIST WARM AIR INFLOW INTO THE CORE OF SYSTEM. THE UPPER TROPOSPHERIC RIDGE LAY NEAR  $19.5^{\circ}\text{N}$ . UNDER THESE FAVOURABLE CONDITIONS, THE LOW PRESSURE AREA OVER CENTRAL PARTS OF SOUTH BOB MOVED WEST-NORTHWESTWARDS AND INTENSIFIED INTO A WELL MARKED LOW PRESSURE AREA OVER SOUTHWEST BOB AT 0000 UTC AND INTO A DEPRESSION AT 0300 UTC OF TODAY, THE 18<sup>TH</sup> NOVEMBER.

MOST OF THE NUMERICAL MODELS (IMD GFS, NCEP GFS, GEFS, NCUM, ECMWF DETERMINISTIC AND ENSEMBLE) ARE INDICATING DEPRESSION OVER SOUTHWEST BOB AT 0000 UTC OF TODAY. MODELS ARE ALSO INDICATING THE SYSTEM WOULD MOVE NEARLY WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND ADJOINING SOUTH ANDHRA PRADESH COASTS ON 19<sup>TH</sup> MORNING. MODELS ARE NOT INDICATING FURTHER INTENSIFICATION OF THIS SYSTEM. SINCE THE SYSTEM IS LYING IN A SHEARED ENVIRONMENT AND THE CLOUD MASS HAS ALREADY ENTERED LAND, THE LAND INTERACTIONS WOULD INHIBIT FURTHER INTENSIFICATION OF THE SYSTEM

**IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SOUTHWEST BOB WOULD MOVE NEARLY WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND ADJOINING SOUTH ANDHRA PRADESH COASTS BY 0000 UTC OF 19<sup>TH</sup>.**

**ARABIAN SEA:**

**SUB: LOW PRESSURE AREA OVER EASTCENTRAL ARABIAN SEA**

YESTERDAY'S LOW PRESSURE AREA OVER EASTCENTRAL ARABIAN SEA (AS) OFF GOA-KARNATAKA COASTS MOVED WEST-NORTHWESTWARDS AND LAY OVER EASTCENTRAL AS AT 0300 UTC OF TODAY, THE 18<sup>TH</sup> NOVEMBER 2021. IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS & BECOME MORE MARKED DURING NEXT 48 HOURS.

AS PER SATELLITE IMAGERY AT 0300 UTC, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL AS BETWEEN LATITUDE  $15.0\text{N}$  &  $20.0\text{N}$  AND LONGITUDE  $67.0\text{E}$  &  $71.5\text{E}$ . MINIMUM CTT REDUCED DURING PAST 24 HOURS AND IS AROUND MINUS  $80^{\circ}\text{C}$  AT 0300 UTC. OUTFLOW CLOUD BANDS LIE OVER GUJARAT, EAST RAJASTHAN, NORTHWEST MADHYA PRADESH AND CENTRAL UTTAR PRADESH.

**REMARKS:**

SEA SURFACE TEMPERATURE (SST) IS ABOUT  $28-29^{\circ}\text{C}$  OVER SOUTHEAST & ADJOINING EASTCENTRAL AS, BECOMING  $<28^{\circ}\text{C}$  OVER WESTERN PARTS OF THE AS. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT  $60-80 \text{ KJ}/\text{CM}^2$  OVER SOUTHEAST & ADJOINING EASTCENTRAL AS AND IS DECREASING TOWARDS WESTERN PARTS OF AS. POSITIVE LOW LEVEL VORTICITY IS ABOUT  $(70-80 \times 10^{-6} \text{ S}^{-1})$  OVER EASTCENTRAL AS WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL CONVERGENCE OF ABOUT  $10 \times 10^{-5} \text{ S}^{-1}$  LAY TO THE NORTHEAST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS  $05-10 \times 10^{-5} \text{ S}^{-1}$  OVER SYSTEM AREA. STRONG POLEWARD OUTFLOW IS SEEN OVER THE SYSTEM AREA. WIND SHEAR IS LOW TO MODERATE (15-20 KT) OVER EASTCENTRAL AS. IT IS GRADUALLY INCREASING OVER SOME AREA TO THE WEST OF SYSTEM CENTRE. THE SYSTEM IS CURRENTLY LYING IN MODERATELY FAVOURABLE ENVIRONMENT (LOW VERTICAL WIND SHEAR, STRONG POLEWARD OUTFLOW AND WARM SEA).

MOST OF THE MODELS LIKE IMD GFS, IMD GPP, NCUM, NEPS, NCUM (REGIONAL) AND ECMWF ARE INDICATING PERSISTENCE OF THE LOW PRESSURE AREA OVER EASTCENTRAL AS WITH VERY SLOW WEST-SOUTHWESTWARD MOVEMENT DURING NEXT 4-5 DAYS TOWARDS SOUTHWEST AS. HOWEVER, NCUM GROUP OF MODELS ARE INDICATING MOVEMENT TOWARDS GULF OF ADEN TILL 23<sup>RD</sup>.

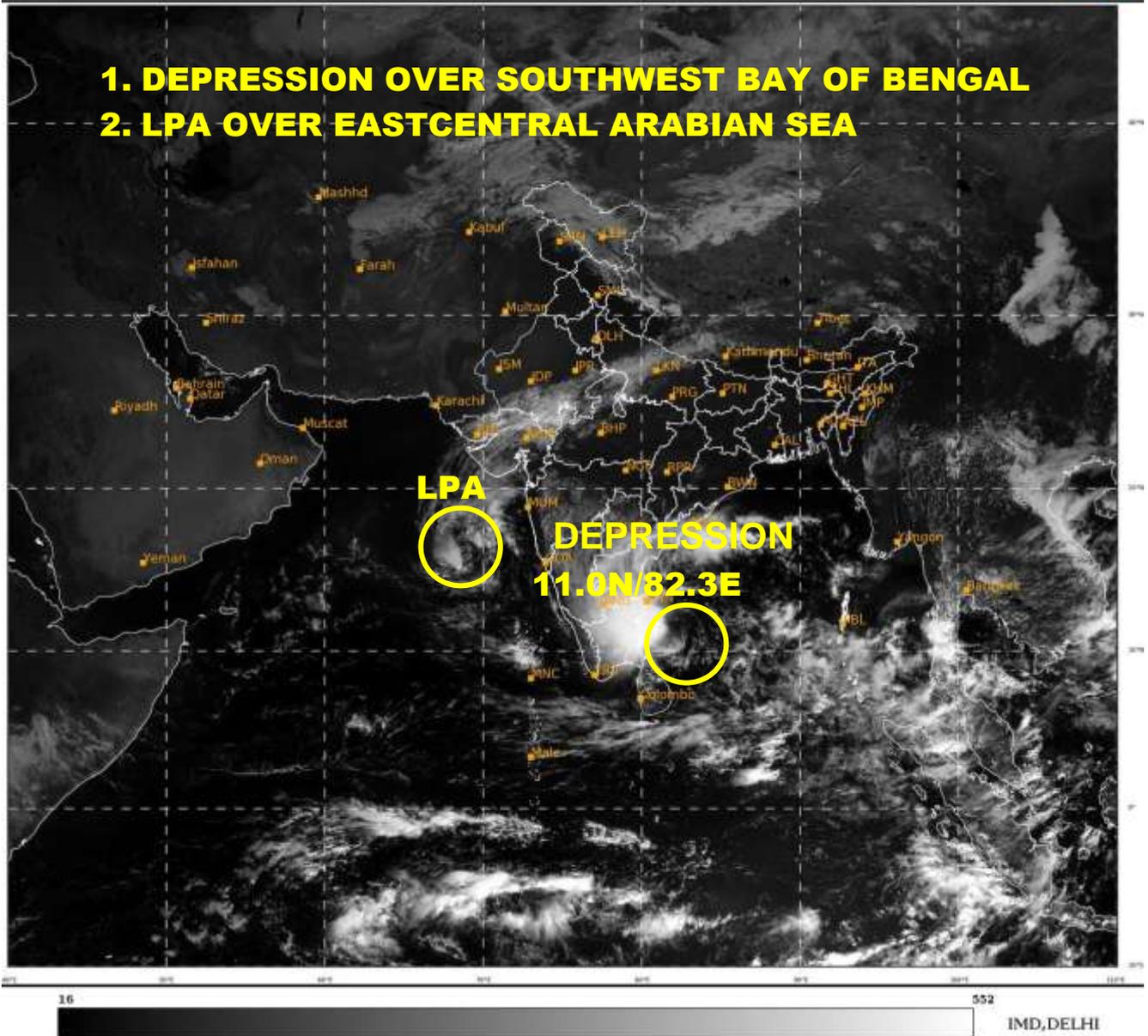
**UNDER THESE CONDITIONS, THE LOW PRESSURE AREA OVER EASTCENTRAL AS IS LIKELY TO MOVE WEST-SOUTHWESTWARDS & BECOME MORE MARKED DURING NEXT 48 HOURS.**

NEXT MESSAGE WILL BE ISSUED AT 0900 UTC OF 18<sup>TH</sup> NOVEMBER, 2021.

**(SUNITHA DEVI)  
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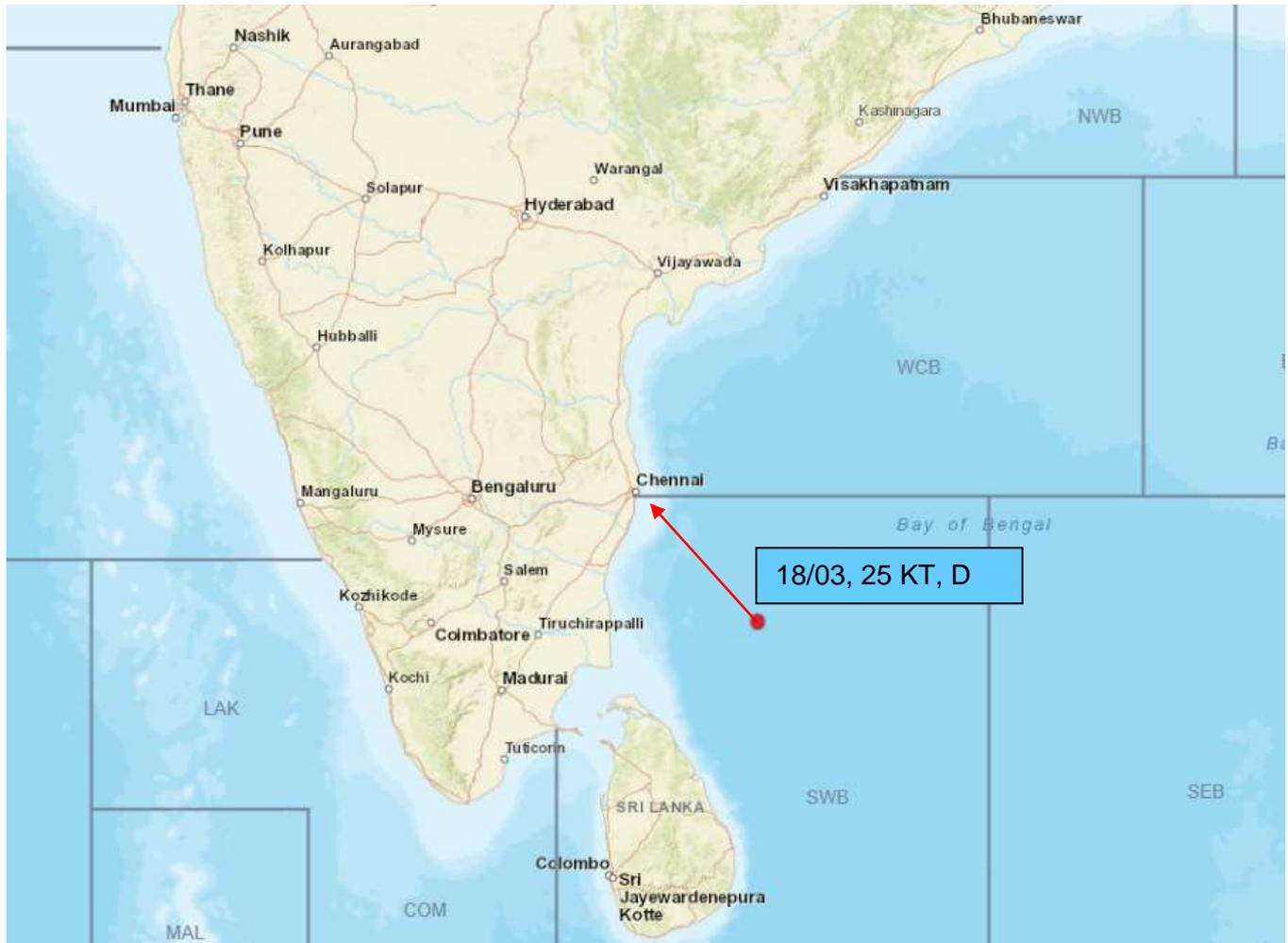
**1. DEPRESSION OVER SOUTHWEST BAY OF BENGAL**  
**2. LPA OVER EASTCENTRAL ARABIAN SEA**



**LPA: LOW PRESSURE AREA**



# OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL OFF NORTH TAMILNADU COAST BASED ON 0300 UTC OF 18<sup>TH</sup> 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 (≥ 120 KT)

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