



**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 0900 UTC OF 18.11.2021 BASED ON 0600 UTC OF 18.11.2021.**

**BAY OF BENGAL:**

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

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL OFF NORTH TAMIL NADU COAST MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 23 KMPH DURING PAST 3 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 18<sup>TH</sup> NOVEMBER 2021, OVER SOUTHWEST BAY OF BENGAL OFF NORTH TAMIL NADU COAST, NEAR LAT. 11.2°N AND LONG. 81.7°E, ABOUT 250 KM SOUTH-SOUTHEAST OF CHENNAI (43279), 220 KM EAST-SOUTHEAST OF PUDUCHERRY (43331) AND 210 KM EAST-NORTHEAST OF KARAIKAL (43346). IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMILNADU & ADJOINING SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY & CHENNAI BY EARLY MORNING (AROUND 0000 UTC) OF TOMORROW, THE 19<sup>TH</sup> NOVEMBER, 2021.

AS PER SATELLITE IMAGERY AT 0600 UTC, THE INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. THE CLOUDS ARE ORGANISED IN SHEAR PATTERN. 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 10.0N & 14.0N AND WEST OF LONGITUDE 82.0E AND ALSO OVER TAMILNADU & ADJOINING SOUTH ANDHRA PRADESH & PALK STRAIT. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93°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.

A BUOY NEAR 13.4°N/84.1°E REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 1006.5 HPA AND MAXIMUM SUSTAINED WIND (MSW) SPEED OF 120°/14KTS.

**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 IS SAME DURING PAST 03 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 IS SAME AND IS ABOUT 30 X10<sup>-5</sup> S<sup>-1</sup> TO THE NORTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE IS SAME AND IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> 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<sup>0</sup>N. THE SYSTEM IS STEERED WEST-NORTHWESTWARDS BY THE EAST-SOUTHEASTERLY WINDS IN THE SOUTHERN PERIPHERY OF THE UPPER TROPOSPHERIC RIDGE. THE LAND INTERACTIONS WOULD INHIBIT FURTHER INTENSIFICATION OF THE SYSTEM. UNDER THESE CONDITIONS, THE DEPRESSION OVER SOUTHWEST BOB WOULD MOVE FURTHER WEST-NORTHWESTWARDS AND CROSS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COAST BY 0000 UTC OF 19<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.

**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 BETWEEN PUDUCHERRY & CHENNAI BY EARLY MORNING (AROUND 0000 UTC) OF TOMORROW, THE 19<sup>TH</sup> NOVEMBER, 2021.**

#### **ARABIAN SEA:**

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

THE LOW PRESSURE AREA OVER EASTCENTRAL ARABIAN SEA (AS) PERSISTED OVER THE SAME REGION AT 0600 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 0600 UTC, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER EASTCENTRAL AS BETWEEN LATITUDE 15.0N & 19.0N AND LONGITUDE 67.0E & 71.0E. MINIMUM CTT IS AROUND MINUS 70<sup>0</sup>C AT 0600 UTC. OUTFLOW CLOUD BANDS LIE OVER GUJARAT, EAST RAJASTHAN, NORTHWEST MADHYA PRADESH AND CENTRAL UTTAR PRADESH.

#### **REMARKS:**

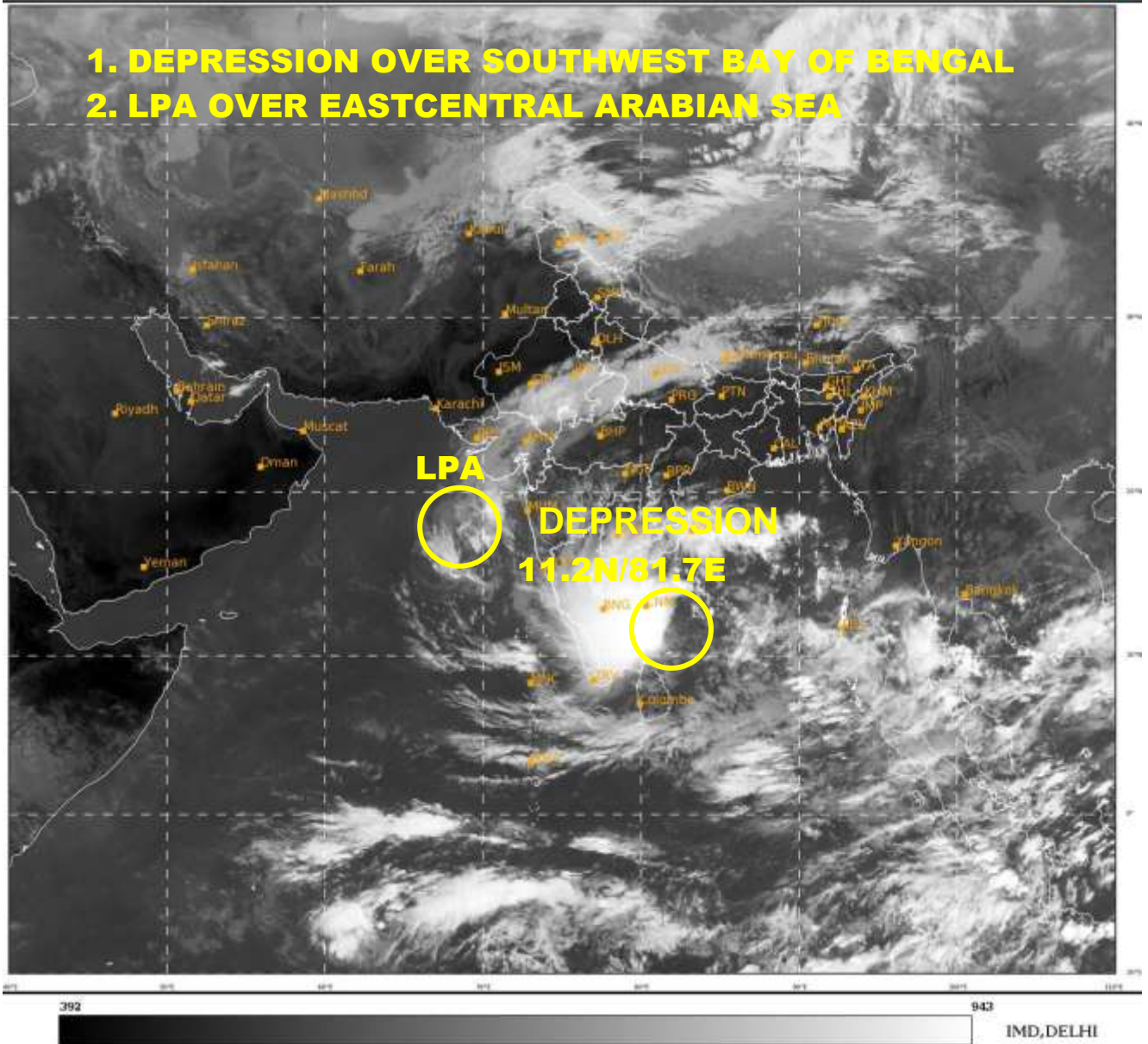
SEA SURFACE TEMPERATURE (SST) IS ABOUT 28-29<sup>0</sup>C OVER SOUTHEAST & ADJOINING EASTCENTRAL AS, BECOMING <28<sup>0</sup>C OVER WESTERN PARTS OF THE AS. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER SOUTHEAST & ADJOINING EASTCENTRAL AS AND IS DECREASING TOWARDS WESTERN PARTS OF AS. POSITIVE LOW LEVEL VORTICITY IS ABOUT (70-80 X10<sup>-6</sup> S<sup>-1</sup>) OVER EASTCENTRAL AS WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL CONVERGENCE OF ABOUT 10 X10<sup>-5</sup> S<sup>-1</sup> LAY TO THE NORTHEAST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE HAS REDUCED DURING PAST THREE HOURS. POLEWARD OUTFLOW IS PERSISTING OVER THE SYSTEM AREA. WIND SHEAR IS LOW TO MODERATE (15-20 KT) OVER EASTCENTRAL AS. IT IS GRADUALLY INCREASING OVER AREAS TO THE WEST OF SYSTEM CENTRE.

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 1500 UTC OF 18<sup>TH</sup> NOVEMBER, 2021.

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**LPA: LOW PRESSURE AREA**



# OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL OFF NORTH TAMIL NADU COAST BASED ON 0600 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