



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

DEMS-RSMCTROPICAL CYCLONES NEW DELHI DATED 08.11.2021

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1900 UTC OF 08.11.2021 BASED ON 1800 UTC OF 08.11.2021.**

**SUB: (A) DEPRESSION OVER EASTCENTRAL & ADJOINING WESTCENTRAL ARABIAN SEA  
(B) LIKELY FORMATION OF A LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL, ITS INTENSIFICATION & MOVEMENT TOWARDS NORTH TAMIL NADU COAST DURING 9<sup>TH</sup> – 11<sup>TH</sup> NOVEMBER 2021.**

**(A) DEPRESSION OVER EASTCENTRAL & ADJOINING WEST-CENTRAL ARABIAN SEA**

THE DEPRESSION OVER EASTCENTRAL ARABIAN SEA MOVED SOUTHWESTWARDS WITH A SPEED OF 05 KMPH DURING PAST 6 HOURS AND WAS CENTRED AT 1800 UTC OF 8<sup>TH</sup> NOVEMBER, 2021, OVER EASTCENTRAL & ADJOINING WESTCENTRAL ARABIAN SEA NEAR LATITUDE 14.5°N AND LONGITUDE 65.8°E, ABOUT 910 KM WEST-SOUTHWEST OF MUMBAI (43003) & 870 KM WEST-SOUTHWEST OF PANJIM (43192). IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA BY TOMORROW MORNING (0000 UTC OF 09<sup>TH</sup> NOVEMBER).

AS PER INSAT 3D IMAGERY AT 1800 UTC, ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 1.0/C.I. 1.5. ASSOCIATED SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL AS BETWEEN LATITUDE 11.0°N & 17.0°N AND LONGITUDE 64.0°E & 70.0°E.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 20 KNOTS GUSTING TO 30 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA.

**(B) LIKELY FORMATION OF A LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL**

THE CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA, EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL PERSISTED AT 1800 UTC OF 8<sup>TH</sup> NOVEMBER, 2021. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS VERY LIKELY TO FORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD DURING NEXT 24 HOURS. IT IS LIKELY TO MOVE WEST –NORTHWESTWARDS, **CONCENTRATE INTO A DEPRESSION AND REACH NEAR NORTH TAMILNADU COAST BY THE EARLY MORNING OF 11<sup>TH</sup> NOVEMBER, 2021.**

AS PER INSAT 3D IMAGERY AT 1800 UTC, SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL AND SOUTH BOB AND SOUTH ANDAMAN SEA.

**REMARKS:**

**(A) DEPRESSION OVER EASTCENTRAL ARABIAN SEA**

THE SEA SURFACE TEMPERATURE (SST) IS ABOUT 28-29°C OVER EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WEST. SIMILARLY, TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-90 KJ/CM<sup>2</sup> OVER EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WESTCENTRAL ARABIAN SEA (<50 KJ/CM<sup>2</sup>).

POSITIVE VORTICITY IS ABOUT  $900 \times 10^{-6} \text{S}^{-1}$  LAY AROUND SYSTEM CENTRE AT 850 HPA WITH VERTICAL EXTENSION UPTO 700 HPA LEVEL. POSITIVE LOWER LEVEL CONVERGENCE IS ABOUT  $5 \times 10^{-5} \text{S}^{-1}$  TO THE SOUTHWEST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE IS ABOUT OF  $10 \times 10^{-5} \text{S}^{-1}$  TO THE SOUTH OF SYSTEM CENTER. MODERATE VERTICAL WIND SHEAR (VWS) ABOUT (15-20 KTS) IS PREVAILING AROUND THE SYSTEM CENTER AND HIGH (>30 KNOTS) ALONG THE FORECAST TRACK. SLIGHT WEAKENING TREND IS SEEN IN ALL THE THERMODYNAMIC PARAMETERS. AS A RESULT, THE SYSTEM IS EXPECTED TO WEAKEN DURING NEXT 06 HOURS. THE SYSTEM IS LYING TO THE SOUTH OF RIDGE NEAR  $16.0^{\circ}\text{N}$ . THE EASTERLY WINDS IN THE MID & UPPER TROPOSPHERIC LEVELS WOULD STEER THE SYSTEM NEARLY WESTWARDS.

MODELS LIKE IMD GFS, NCEP GFS, ECMWF ARE INDICATING THAT THE SYSTEM WOULD MOVE WEST-SOUTHWESTWARDS & WEAKEN GRADUALLY DURING NEXT 06 HOURS. HOWEVER, NCUM GROUP OF MODELS IS STILL INDICATING FURTHER INTENSIFICATION OF SYSTEM WHILE MOVING WEST-SOUTHWESTWARDS TOWARDS SOUTHWEST ARABIAN SEA.

**IN VIEW OF ABOVE, THE SYSTEM IS LIKELY TO MOVE WEST-SOUTHWESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA BY TODAY MORNING (0000 UTC OF 9<sup>TH</sup> NOVEMBER).**

**(B) LIKELY FORMATION OF A LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL**

SEA SURFACE TEMPERATURE (SST) IS ABOUT  $29-30^{\circ}\text{C}$  OVER ENTIRE BOB. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 100-120 OVER SOME PARTS OF EASTERN EQUATORIAL INDIAN OCEAN ADJOINING SOUTHEAST BOB & SOUTH ANDAMAN SEA, SOUTHWEST BOB OFF COASTAL BELT OF SOUTH ANDHRA PRADESH & NORTH TAMIL NADU. IN ADDITION, A NEAR EQUATORIAL CONVERGENCE ZONE IS PRESENT ROUGHLY ALONG  $5 \text{ DEG. N}$  LATITUDE OVER THE REGION, PROVIDING THE NECESSARY CYCLONIC VORTICITY.

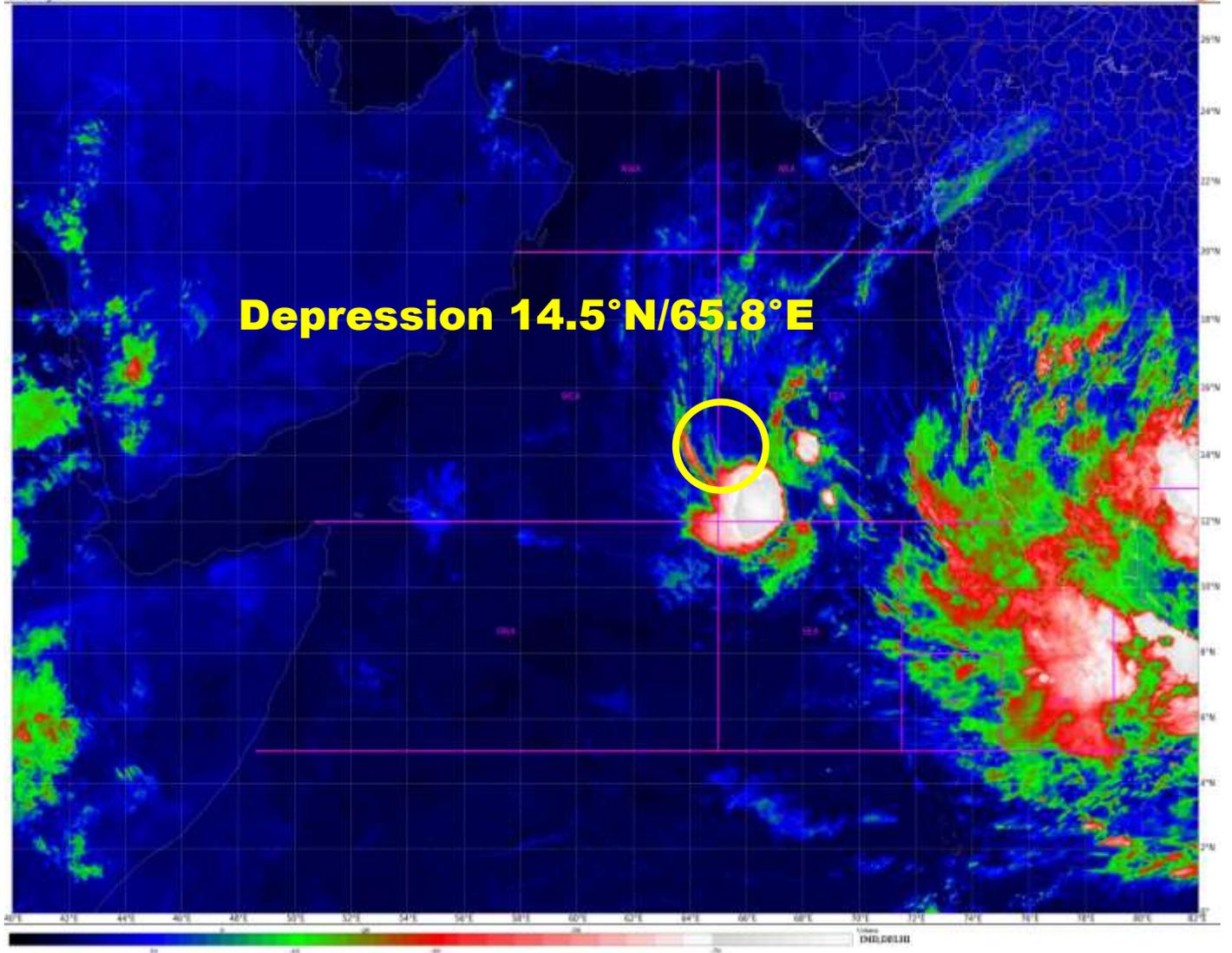
AN ELONGATED ZONE OF POSITIVE LOW LEVEL CONVERGENCE ( $05-20 \times 10^{-5} \text{S}^{-1}$ ) LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BOB. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{S}^{-1}$  TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE LOW LEVEL VORTICITY IS ABOUT ( $100 \times 10^{-6} \text{S}^{-1}$ ) TO THE SOUTHEAST OF SYSTEM AREA WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. THESE FAVOURABLE CONDITIONS ARE CONDUCIVE FOR DEVELOPMENT OF LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD DURING NEXT 24 HOURS AND FURTHER CONCENTRATE INTO A DEPRESSION SUBSEQUENTLY.

MOST OF THE MODELS INCLUDING GFS, ECMWF AND NCUM ARE INDICATING FURTHER INTENSIFICATION OF THE LIKELY LOW PRESSURE AREA OVER SOUTHEAST BOB UPTO DEPRESSION OVER SOUTHWEST BOB AROUND 10<sup>TH</sup> NOVEMBER. HOWEVER, IMD GFS IS INDICATING INTENSIFICATION TO HIGH INTENSITY CYCLONIC STORM. HOWEVER, ALL MODELS ARE UNANIMOUS ABOUT THE MOVEMENT OF SYSTEM TOWARDS TAMILNADU COAST DURING TILL 11<sup>TH</sup> AND ITS CROSSING IN THE MORNING HOURS (0000 UTC) OF 11<sup>TH</sup>.

**IN VIEW OF ABOVE, THE CYCLONIC CIRCULATION OVER BOB IS LIKELY TO CONCENTRATE INTO A LOW PRESSURE AREA OVER SOUTHEAST BOB DURING NEXT 24 HOURS. FURTHER INTENSIFICATION AND MOVEMENT OF THE SYSTEM ARE CLOSELY MONITORED.**

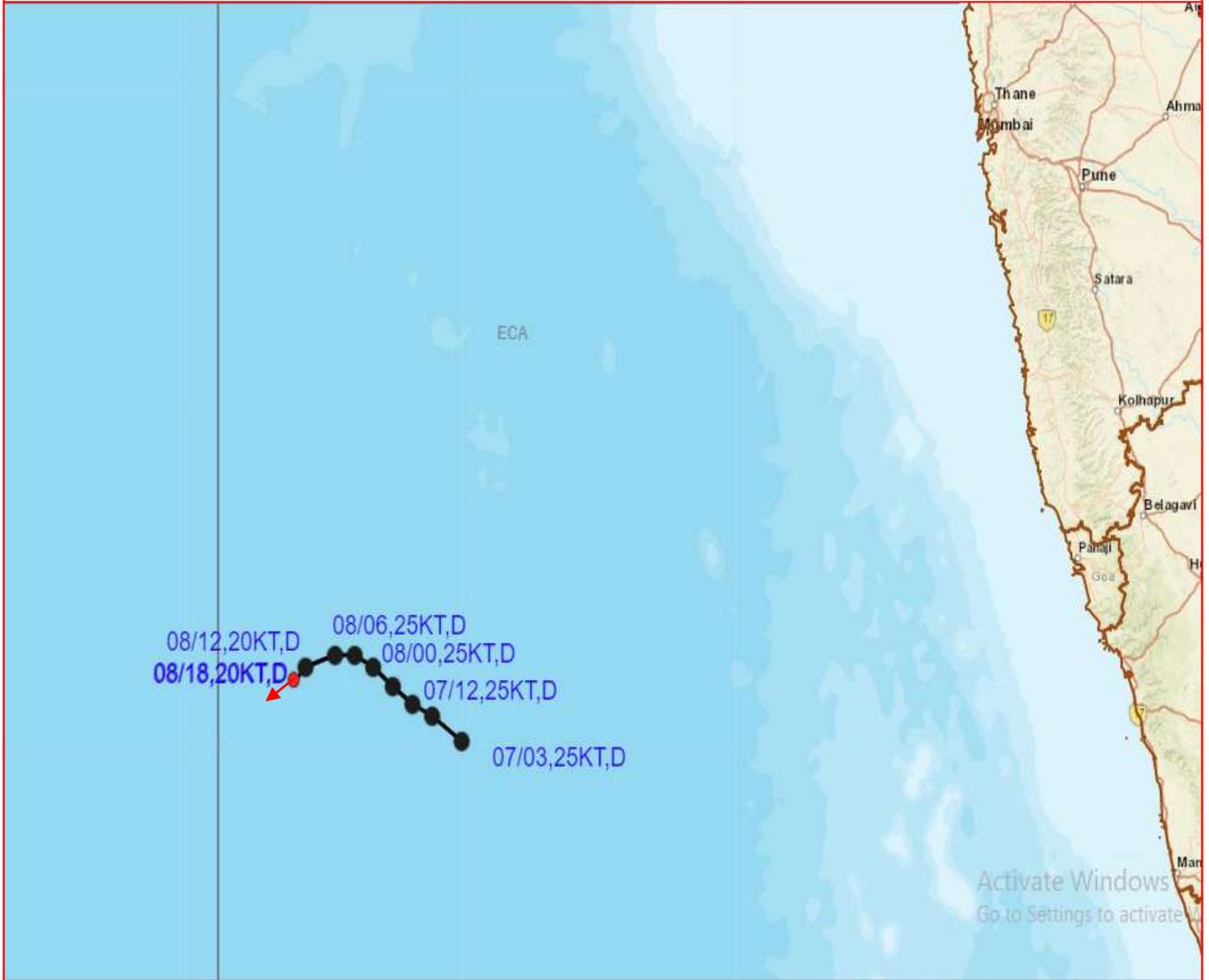
THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 9TH NOVEMBER, 2021.

**(SHOBHIT KATIYAR)**  
SCIENTIST-C, RSMC, NEW DELHI





# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER EAST CENTRAL & ADJOINING WESTCENTRAL ARABIAN SEA BASED ON 1800 UTC OF 08<sup>TH</sup> NOVEMBER 2024



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 ( $\geq$  120 KT)

-  LESS THAN 34 KT
-  34-47 KT
-   $\geq$  48 KT
-  OBSERVED TRACK
-  FORECAST TRACK
-  CONE OF UNCERTAINTY