



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 0600UTC OF 08.11.2021 BASED ON 0300UTC OF 08.11.2021.**

**SUB: (A) DEPRESSION OVER EAST-CENTRAL 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 ARABIAN SEA**

THE DEPRESSION OVER EASTCENTRAL ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 08 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 8<sup>TH</sup> NOVEMBER, 2021, OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.7°N AND LONGITUDE 66.4°E, ABOUT 840 KM WEST-SOUTHWEST OF MUMBAI (43003) & 800 KM WEST-SOUTHWEST OF PANJIM (43192). IT IS LIKELY TO MOVE NEARLY WESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA BY TOMORROW MORNING (0000 UTC OF 9<sup>TH</sup> NOVEMBER). THEREAFTER, IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS.

**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
08.11.21/0300	14.7/66.4	45-55 GUSTING TO 65	DEPRESSION
08.11.21/1200	14.8/66.1	40-50 GUSTING TO 60	DEPRESSION
09.11.21/0000	14.8/65.7	30-40 GUSTING TO 50	WELL MARKED LOW PRESSURE AREA

AS PER INSAT 3D IMAGERY AT 0300 UTC, ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 1.5. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA BETWEEN LATITUDE 13.0N & 17.0N AND LONGITUDE 65.0E & 71.0E.

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.

**(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 0300 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 0300UTC, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL (BOB) AND MODEARTE TO INTENSE CONVECTION OVER SOUTHERN PARTS OF CENTRAL BOB AND 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 100 X10<sup>-6</sup>S<sup>-1</sup> LAY AROUND SYSTEM CENTRE AT 850 HPA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF 10 X10<sup>-5</sup>S<sup>-1</sup> LAY TO THE EAST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE OF 20 X10<sup>-5</sup>S<sup>-1</sup> IS ALSO SEEN TO THE SOUTHEAST OF SYSTEM CENTER. MODERATE VERTICAL WIND SHEAR (VWS) ABOUT (20-25 KTS) IS PREVAILING AROUND THE SYSTEM CENTER AND HIGH (>30 KNOTS) ALONG THE FORECAST TRACK. THESE THERMODYNAMIC PARAMETERS ARE FAVOURABLE FOR MAINTENANCE OF THE INTENSITY OF THE SYSTEM DURING NEXT 24 HOURS. THE SYSTEM IS EXPECTED TO WEAKEN THEREAFTER UNDER THE INFLUENCE OF INCREASED VERTICAL WIND SHEAR AND LOW OCEAN THERMAL ENERGY OVER WESTCENTRAL ARABIAN SEA. THE SYSTEM IS LYING TO THE SOUTH OF RIDGE NEAR 15.5°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 SYSEYM WOULD NOT INTENSIFY FURTHER WHILE MOVING WESTWARDS ACROSS CENTRAL ARABIAN SEA AND WEAKEN DURING NEXT 24 HOURS. HOWEVER, NCUM GROUP OF MODELS IS INDICATING FURTHER INTENSIFICATION OF SYSTEM WHILE MOVING WEST-SOUTHWESTWARDS TOWARDS SOUTHWEST ARABIAN SEA.

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

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

SEA SURFACE TEMPERATURE (SST) IS ABOUT 29-30°C OVER ENTIRE BOB. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 120-140 OVER SOME PARTS OF EASTERN EQUATORIAL INDIAN OCEAN ADJOINING SUMATRA COAST AND ABOUT 100 OVER ADJOINING SOUTHEAST BOB. IN ADDITION, A NEAR EQUATORIAL CONVERGENCE ZONE IS PRESENT ROUGHLY ALONG 5 DEG. N LATITUDE OVER THE REGION, PROVIDING THE NECESSARY CYCLONIC VORTICITY. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 40 X10<sup>-5</sup>S<sup>-1</sup> TO THE WEST AND ANOTHER ZONE OF 30 TO THE SOUTHEAST OF SYSTEM AREA. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED AND IS ABOUT 40 X10<sup>-5</sup>S<sup>-1</sup> TO THE WEST AND ANOTHER ZONE OF 30 TO THE SOUTHEAST OF SYSTEM CENTRE. POSITIVE LOW LEVEL VORTICITY HAS ALSO INCREASED AND IS ABOUT (60-80 X10<sup>-6</sup> S<sup>-1</sup>) TO THE WEST OS SYSTEM AREA. 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 8<sup>TH</sup>-11<sup>TH</sup> AND ITS CROSSING IN THE MORNING HOURS (0000 UTC) OF 11<sup>TH</sup>.

**IN VIEW OF ABOVE, THE SYSTEM OVER BOB IS BEING CONTINUOUSLY MONITORED FOR FURTHER DEVELOPMENT AND MOVEMENT.**

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 8TH NOVEMBER, 2021.

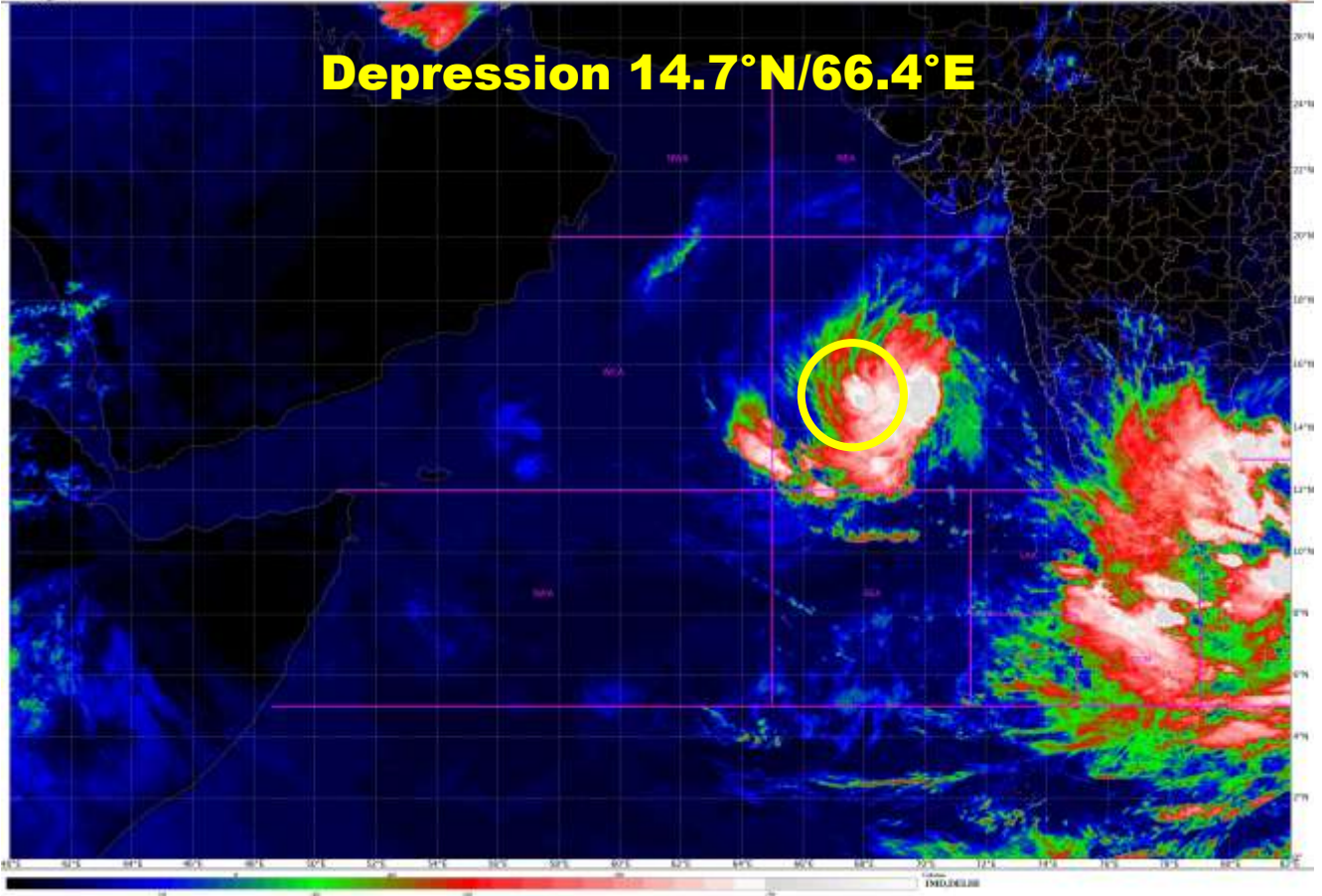
(SUNITHA DEVI S)  
SCIENTIST-F, RSMC, NEW DELHI

SAT : INSAT-3DR IMG  
1340\_TIR1\_T10MP 51.8 um  
ARABIAN SEA

06-11-2021/0543 to 06120 GMT  
06-11-2021/1333 to 13420 IST



**Depression 14.7°N/66.4°E**











# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER EASTCENTRAL ARABIAN SEA BASED ON 0300 UTC OF 08<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  $\geq 120$  KTS

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