



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

DEMS-RSMCTROPICAL CYCLONES NEW DELHI DATED 09.11.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0310 UTC OF 09.11.2021 BASED ON 0000 UTC OF 09.11.2021.

- SUB: (A) DEPRESSION WEAKENED INTO A WELL MARKED LOW PRESSURE AREA OVER CENTRAL PARTS OF ARABIAN SEA
(B) LIKELY FORMATION OF A LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL, ITS INTENSIFICATION & MOVEMENT TOWARDS NORTH TAMIL NADU COAST DURING 9TH – 11TH NOVEMBER 2021.**
- (A) DEPRESSION WEAKENED INTO A WELL MARKED LOW PRESSURE AREA OVER CENTRAL PARTS OF ARABIAN SEA**

THE DEPRESSION OVER EASTCENTRAL & ADJOINING WEST-CENTRAL ARABIAN SEA MOVED WEST-SOUTHWESTWARDS AND WEAKENED INTO A WELL MARKED LOW PRESSURE AREA AT 0000 UTC OF 9TH NOVEMBER, 2021, OVER CENTRAL PARTS OF ARABIAN SEA. IT IS LIKELY TO MOVE WEST-SOUTHWESTWARDS DURING NEXT 03 DAYS.

AS PER INSAT 3D IMAGERY AT 0000 UTC, ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -90°C . INTENSITY OF THE SYSTEM IS CATEGORISED AS T 1.0. CENTER NOT CLEARLY DEFINED IN THE IR IMAGERY. ASSOCIATED SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL AS BETWEEN LATITUDE 11.0°N & 16.0°N AND LONGITUDE 64.0°E & 68.5°E .

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 15 KNOTS GUSTING TO 25 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM AREA. THE ESTIMATED CENTRAL PRESSURE IS 1004 HPA.

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

THE CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD AND EXTENDS UP TO 5.8 KM ABOVE MEAN SEA LEVEL THERE AT 0000 UTC OF 09TH NOVEMBER. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS VERY LIKELY TO FORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD DURING NEXT 12 HOURS. IT IS LIKELY TO MOVE WEST –NORTHWESTWARDS, **CONCENTRATE INTO A DEPRESSION AND REACH NEAR NORTH TAMILNADU COAST BY THE EARLY MORNING OF 11TH NOVEMBER, 2021.**

AS PER INSAT 3D IMAGERY AT 0000UTC, 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) WELL MARKED LOW PRESSURE AREA OVER CENTRAL PARTS OF ARABIAN SEA

THE SEA SURFACE TEMPERATURE (SST) IS ABOUT $28-29^{\circ}\text{C}$ OVER EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WEST. SIMILARLY, TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT $80-90 \text{ KJ}/\text{CM}^2$ OVER EASTCENTRAL ARABIAN

SEA WITH DECREASING TREND TOWARDS WESTCENTRAL ARABIAN SEA ($<50 \text{ KJ/CM}^2$). POSITIVE VORTICITY IS ABOUT $90 \times 10^{-6} \text{S}^{-1}$ LAY AROUND SYSTEM CENTRE AT 850 HPA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOWER LEVEL CONVERGENCE IS ABOUT $5-10 \times 10^{-5} \text{S}^{-1}$ TO THE SOUTHEAST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE IS ABOUT OF $5-10 \times 10^{-5} \text{S}^{-1}$ AROUND THE SYSTEM CENTER. MODERATE VERTICAL WIND SHEAR (VWS) ABOUT (10-15 KTS) IS PREVAILING AROUND THE SYSTEM CENTER AND HIGH (25-30 KNOTS) ALONG THE FORECAST TRACK. SLIGHT WEAKENING TREND IS SEEN IN ALL THE THERMODYNAMIC PARAMETERS. AS A RESULT, THE SYSTEM HAS WEAKEN AT 0000 UTC OF TODAY. THE SYSTEM IS LYING TO THE SOUTH OF RIDGE NEAR 16.0°N . THE EASTERLY WINDS IN THE MID & UPPER TROPOSPHERIC LEVELS WOULD STEER THE SYSTEM NEARLY WEST-SOUTHWEST WARDS.

MODELS LIKE IMD GFS, NCEP GFS, ECMWF ARE INDICATING THAT THE SYSTEM WOULD MOVE WEST-SOUTHWESTWARDS DURING NEXT 02-03 DAYS. 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 DURING NEXT 03 DAYS.

(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 DEG. N LATITUDE OVER THE REGION, PROVIDING THE NECESSARY CYCLONIC VORTICITY.

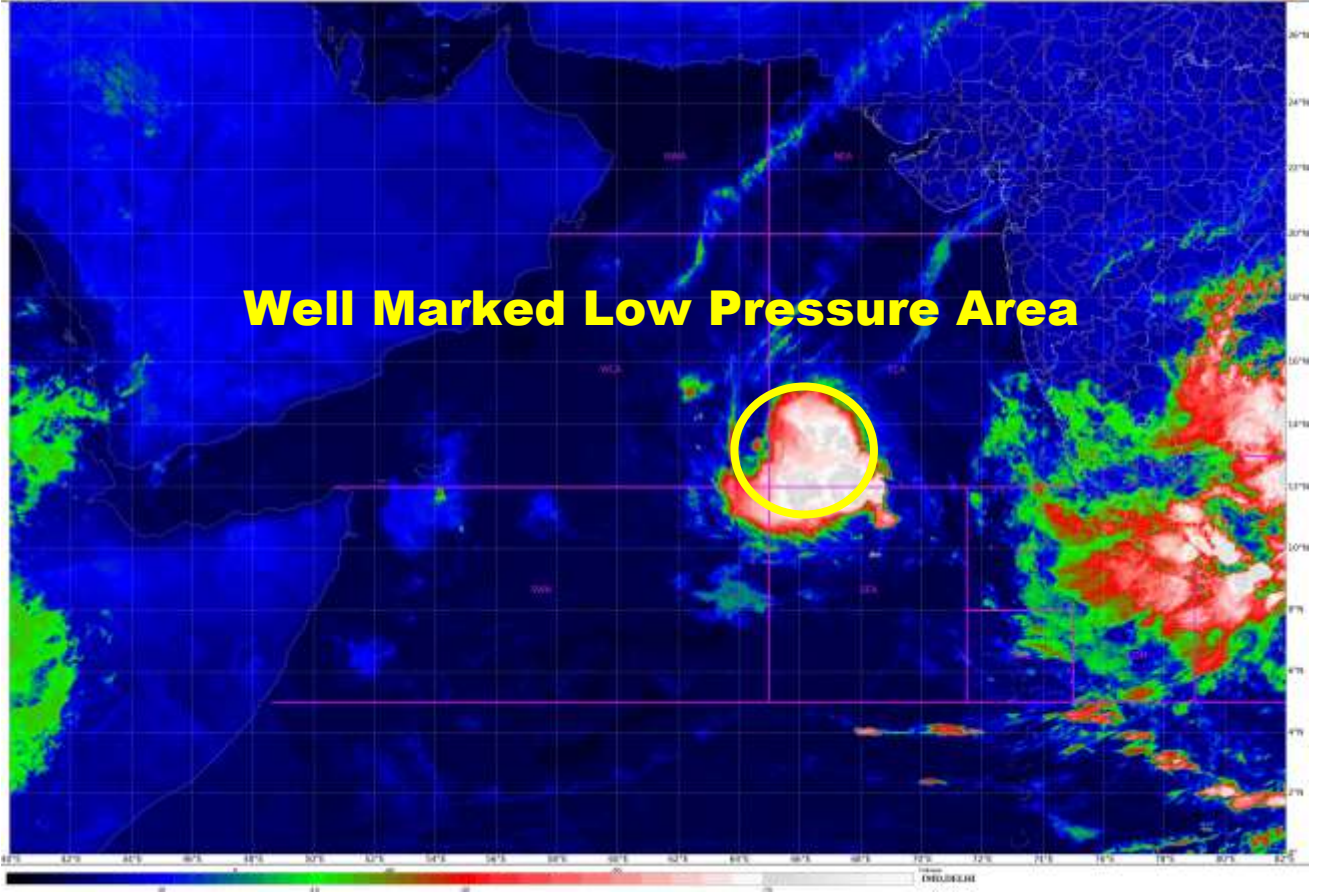
AN ELONGATED ZONE OF POSITIVE LOW LEVEL CONVERGENCE ($10-30 \times 10^{-5} \text{S}^{-1}$) LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BOB. UPPER LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{S}^{-1}$ AROUND THE SYSTEM CENTRE. POSITIVE LOW LEVEL VORTICITY IS ABOUT ($80 \times 10^{-6} \text{S}^{-1}$) 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 12 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^{TH} 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^{TH} AND ITS CROSSING IN THE MORNING HOURS (0000 UTC) OF 11^{TH} .

IN VIEW OF ABOVE, THE CYCLONIC CIRCULATION OVER BOB IS LIKELY TO CONCENTRATE INTO A LOW PRESSURE AREA OVER SOUTHEAST BOB AND NEIGHBOURHOOD DURING NEXT 12 HOURS. FURTHER INTENSIFICATION AND MOVEMENT OF THE SYSTEM ARE CLOSELY MONITORED.

THIS IS THE LAST BULLETIN PERTAINING TO THIS SYSTEM. HOWEVER, UPDATE ON BAY OF BENGAL SYSTEM WILL BE PROVIDED AT 0600 UTC OF TODAY

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OBSERVED TRACK OF DEPRESSION OVER ARABIAN SEA DURING 07TH-09TH 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 KT)

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