



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 0900UTC OF 08.11.2021 BASED ON 0600UTC 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 9TH – 11TH NOVEMBER 2021.**

(A) DEPRESSION OVER EASTCENTRAL ARABIAN SEA

THE DEPRESSION OVER EASTCENTRAL ARABIAN SEA MOVED NEARLY WESTWARDS WITH A SPEED OF 06 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 8TH NOVEMBER, 2021, OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.7°N AND LONGITUDE 66.2°E, ABOUT 860 KM WEST-SOUTHWEST OF MUMBAI (43003) & 820 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.

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
08.11.21/0600	14.7/66.2	45-55 GUSTING TO 65	DEPRESSION
08.11.21/1800	14.8/66.1	40-50 GUSTING TO 60	DEPRESSION
09.11.21/0600	14.8/65.7	30-40 GUSTING TO 50	WELL MARKED LOW PRESSURE AREA

AS PER INSAT 3D IMAGERY AT 0600 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 0600 UTC OF 8TH 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 11TH NOVEMBER, 2021.**

AS PER INSAT 3D IMAGERY AT 0600UTC, 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/CM² OVER EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WESTCENTRAL ARABIAN SEA (<50 KJ/CM²). POSITIVE VORTICITY IS ABOUT 100 X10⁻⁶S⁻¹ LAY AROUND SYSTEM CENTRE AT 850 HPA WITH VERTICAL EXTENSION UPTO 700 HPA LEVEL. POSITIVE LOWER LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 5 X10⁻⁵S⁻¹ TO THE EAST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT OF 10 X10⁻⁵S⁻¹ 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 12 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 16.5°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 SYSTEM WOULD NOT INTENSIFY FURTHER WHILE MOVING WESTWARDS ACROSS CENTRAL ARABIAN SEA AND WEAKEN DURING NEXT 12 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 WEST-SOUTHWESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA BY TOMORROW MORNING (0000 UTC OF 9TH NOVEMBER).

(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. AN ELONGATED ZONE OF POSITIVE LOW LEVEL CONVERGENCE (05-40 X10⁻⁵S⁻¹) LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BOB. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED AND IS ABOUT 50 X10⁻⁵S⁻¹ TO THE WEST AND ANOTHER ZONE OF 40 TO THE SOUTHEAST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE LAY OVER ENTIRE EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BOB . POSITIVE LOW LEVEL VORTICITY HAS ALSO INCREASED AND IS ABOUT (80-100 X10⁻⁶ S⁻¹) TO THE WEST OF SYSTEM AREA WITH VERTICAL EXTENSION UPTO 500 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 10TH 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 8TH-11TH AND ITS CROSSING IN THE MORNING HOURS (0000 UTC) OF 11TH.

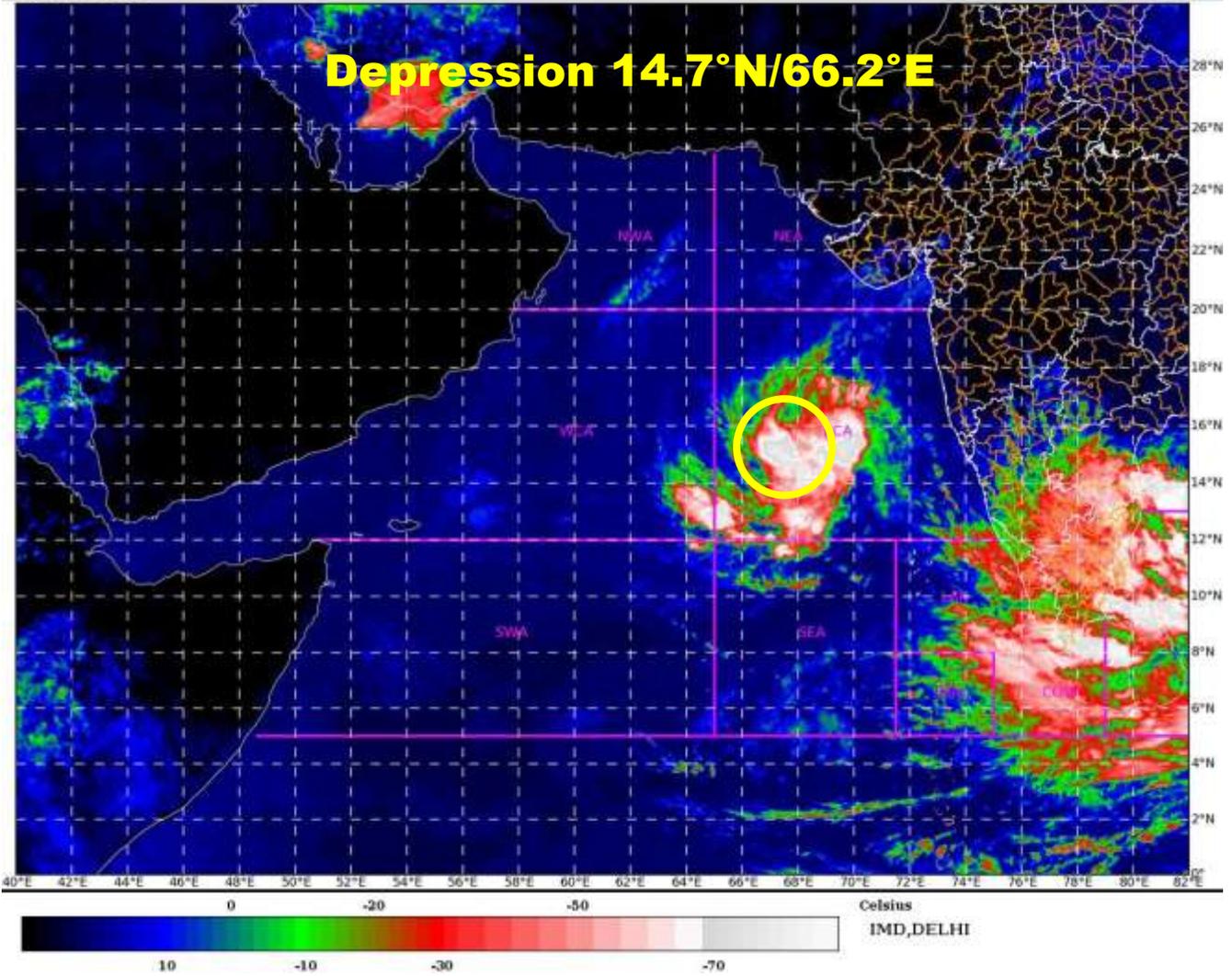
IN VIEW OF ABOVE, THE SYSTEM OVER BOB IS BEING CONTINUOUSLY MONITORED FOR FURTHER DEVELOPMENT AND MOVEMENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 8TH NOVEMBER, 2021.

(SUNITHA DEVI S)
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SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

08-11-2021/(0730 to 0756) GMT
08-11-2021/(1300 to 1326) IST





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER EAST CENTRAL ARABIAN SEA BASED ON 0600 UTC OF 08TH 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