



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 0300UTC OF 08.11.2021 BASED ON 0000UTC 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 NORTHWESTWARDS WITH A SPEED OF 05 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0000 UTC OF 8TH NOVEMBER, 2021, OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.6°N AND LONGITUDE 66.5°E, ABOUT 840 KM SOUTHWEST OF MUMBAI (43003) & 790 KM WEST-SOUTHWEST OF PANJIM (43192). IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND MAINTAIN THE INTENSITY OF A DEPRESSION DURING NEXT 24 HOURS, WEAKEN GRADUALLY THEREAFTER AND 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
08.11.21/0000	14.6/66.5	45-55 GUSTING TO 65	DEPRESSION
08.11.21/1200	14.8/66.1	40-50 GUSTING TO 60	DEPRESSION
09.11.21/0000	15.0/65.7	30-40 GUSTING TO 50	WELL MARKED LOW PRESSURE AREA

AS PER INSAT 3D IMAGERY AT 0000 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 AND ADJOINING EQUATORIAL INDIAN OCEAN LAY OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA, EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL AT 0000 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 BECOME MORE MARKED OVER THE SAME REGION DURING THE

SUBSEQUENT 24 HOURS AND MOVE WEST-NORTHWESTWARDS AND REACH NEAR NORTH TAMIL NADU COAST ON 11TH NOVEMBER 2021.

AS PER INSAT 3D IMAGERY AT 0000UTC, SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL (BOB) AND MODEARTE TO INTENSE CONVECTION OVER ANDAMAN SEA

REMARKS:

(A) DEPRESSION OVER EAST-CENTRAL 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. POSITIVE VORTICITY IS ABOUT 100 X10⁻⁶S⁻¹ LAY AROUND SYSTEM CENTRE AT 850 HPA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF 10 X10⁻⁵S⁻¹ LAY TO THE EAST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE OF 20 X10⁻⁵S⁻¹ IS ALSO SEEN TO THE EAST 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 36 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°N. THE EASTERLY WINDS IN THE MID & UPPER TROPOSPHERIC LEVELS WOULD STEER THE SYSTEM WESTWARDS.

MODELS LIKE IMD GFS, NCEP GFS, ECMWF ARE INDICATING THAT THE SYSEYM WOULD NOT INTENSIFY FURTHER WHILE MOVING WEST-NORTHWESTWARDS ACROSS CENTRAL ARABIAN SEA AND WEAKEN DURING NEXT 36 HOURS. HOWEVER, NCUM GROUP OF MODELS IS INDICATING FURTHER INTENSIFICATION OF SYSTEM WHILE MOVING WEST-NORTHWESTWARDS TOWARDS WESTCENTRAL ARABIAN SEA.

IN VIEW OF ABOVE, IT IS CONCLUDED THAT THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, MAINTAIN THE INTENSITY OF A DEPRESSION DURING NEXT 24 HOURS, WEAKEN GRADUALLY THEREAFTER AND MOVE WEST-SOUTHWESTWARDS.

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

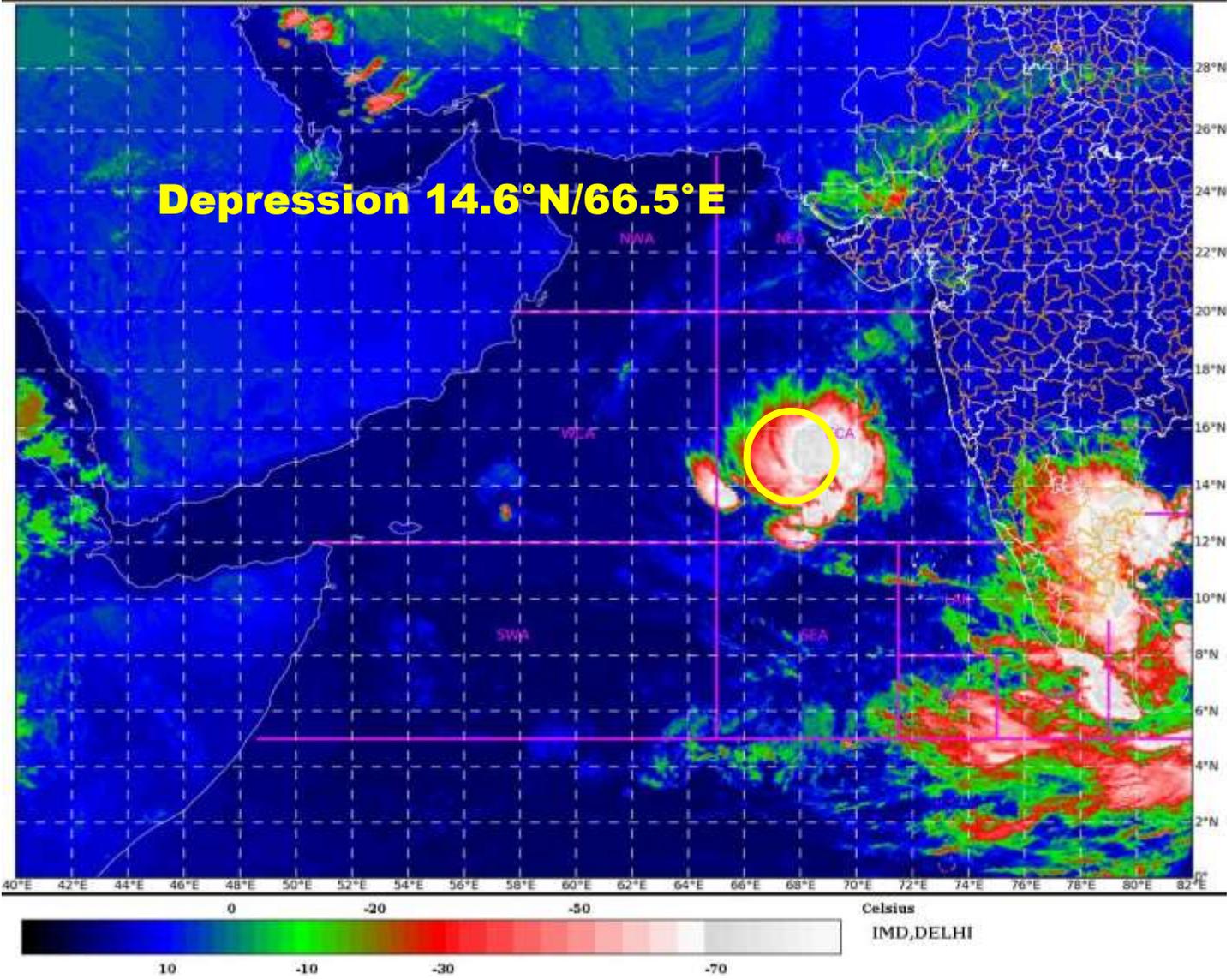
SEA SURFACE TEMPERATURE (SST) IS ABOUT 29-30°C OVER ENTIRE BOB. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 120-140 OVER SOME PARTS OF EASTERN EQUATORIAL INDIAN OCEAN ADJOINING SUMATRA COAST AND ABOUT 100 OVER ADJOINING SOUTHEAST BOB. IN ADDITION, A NEAR EQUATORIAL CONVERGENCE ZONE IS PRESENT ROUGHLY ALONG 5 DEG. N LATITUDE OVER THE REGION, PROVIDING THE NECESSARY CYCLONIC VORTICITY. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 20-30 X10⁻⁵S⁻¹, UPPER LEVEL DIVERGENCE IS ABOUT 20-30 X10⁻⁵S⁻¹, AND THE POSITIVE LOW LEVEL VORTICITY (50-60 X10⁻⁶ S⁻¹), IS MAINTAINED OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BOB. THESE ARE FAVOURABLE TO SUPPORT CONVECTIVE ACTIVITY OVER THIS REGION.

A FEW OF THE MODELS (IMD GFS & NCEP GFS) ARE ALSO INDICATING FURTHER INTENSIFICATION OF THE LIKELY LOW PRESSURE AREA OVER SOUTHEAST BOB UPTO THE STAGE OF A CYCLONIC STORM OVER SOUTHWEST BOB AROUND 10TH NOVEMBER.

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

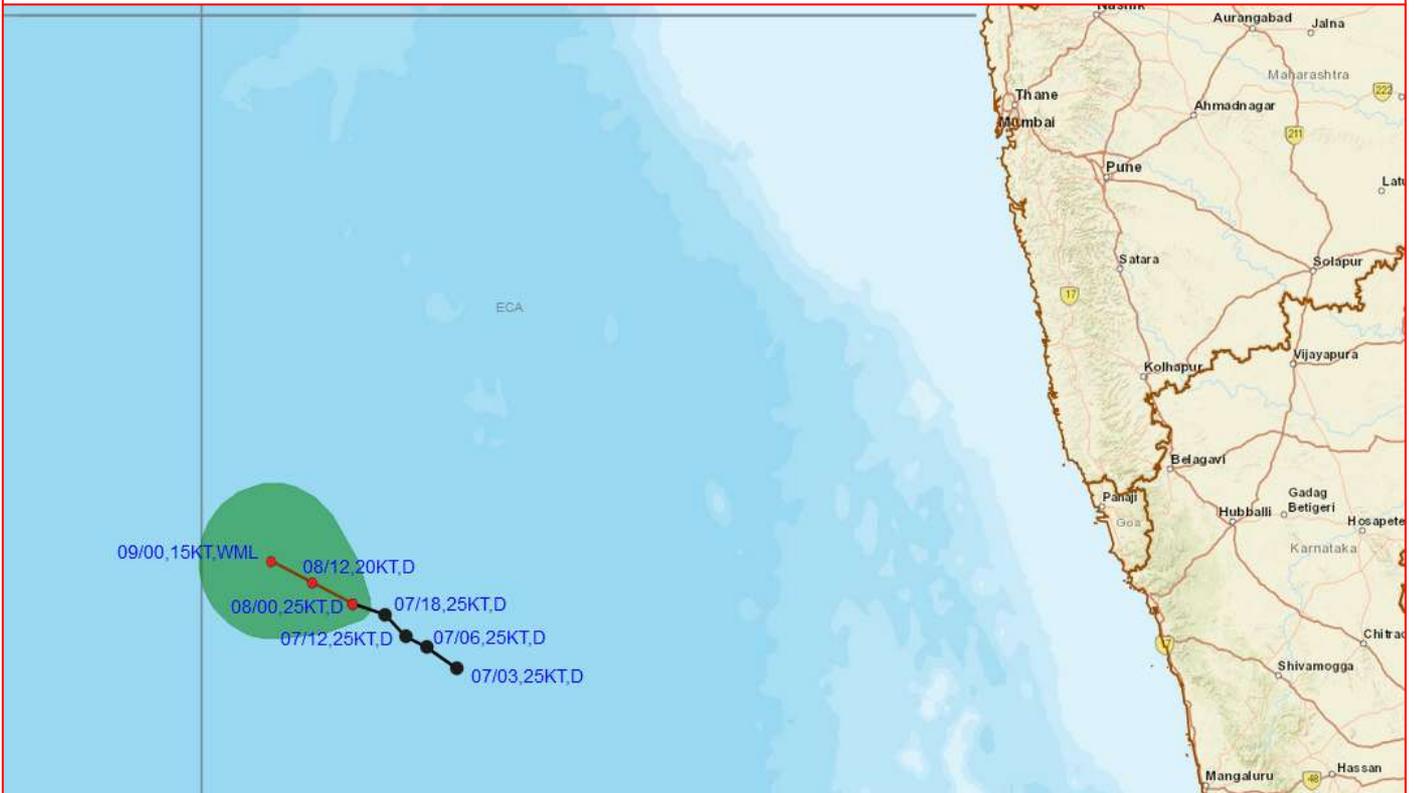
THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 8TH NOVEMBER, 2021.

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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION OVER EAST CENTRAL ARABIAN SEA BASED ON 0000 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