



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 13.09.2021

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL OF BENGAL OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 13.09.2021 BASED ON 0000 UTC OF 13.09.2021.

BAY OF BENGAL:

THE DEPRESSION OVER NORTHWEST BAY OF BENGAL & ADJOINING ODISHA COAST MOVED WEST-NORTHWESTWARDS DURING PAST 6 HOURS WITH A SPEED OF 5 KMPH, INTENSIFIED INTO A **DEEP DEPRESSION** AND LAY CENTRED AT 0000 UTC OF 13TH SEPTEMBER, 2021, OVER NORTHWEST BAY OF BENGAL, VERY CLOSE TO NORTH ODISHA COAST, NEAR LATITUDE 20.5°N AND LONGITUDE 86.9°E, CLOSE TO SOUTHEAST OF CHANDBALI (42973).

LATEST COASTAL OBSERVATIONS INDICATE THAT IT FURTHER MOVED WEST-NORTHWESTWARDS AND CROSSED NORTH ODISHA COAST, CLOSE TO SOUTH OF CHANDBALI(42973) BETWEEN 0000 & 0100 UTC AS A DEEP DEPRESSION WITH MAXIMUM SUSTAINED WIND SPEED OF 30 KNOTS AND LAY CENTRED AT 0100 UTC OF 13TH SEPTEMBER 2021 OVER NORTH COASTAL ODISHA, VERY CLOSE TO CHANDBALI. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS NORTH ODISHA, NORTH CHHATTISGARH & MADHYA PRADESH DURING NEXT 48 HOURS. IT IS VERY LIKELY TO WEAKEN INTO A DEPRESSION DURING THE NEXT 24 HOURS.

AS PER INSAT 3D IMAGERY AT 0000 UTC, THE SYSTEM HAS FURTHER INTENSIFIED AND THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL, ODISHA ADJOINING CHHATTISGARH, COASTAL ANDHRA PRADESH, SOUTH GANGETIC WEST BENGAL AND SOUTH JHARKHAND . MINIMUM CLOUD TOP TEMPERATURE IS -93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS 990 HPA.

AT 0000UTC OF 13 SEP, COASTAL STATIONS CHANDBALI, PARADIP AND BALASORE REPORTED MEAN SEA LEVEL PRESSURE(MSLP) OF 989.1, 992.5 AND 991.7 HPA WITH 24 HOURS PRESSURE CHANGE OF -7.8 HPA, -4.4 AND -6.3 HPA RESPECTIVELY

BUOYS LOCATED NEAR LAT 17.5DEG N/LONG 89.3 DEG E MSLP OF 999.7 HPA AND WINDS OF 100 DEG/19.4 KTS AND NEAR LAT 16.4DEG N/LONG 88.1 DEG E REPORTED 1000.6HPA AND WINDS OF 230/15.6 RESPECTIVELY.

REMARKS:

THE FAVOURABLE SEA SURFACE TEMPERATURE (SST) OF ABOUT 29-30°C OVER NORTHWEST BAY OF BENGAL (BOB), THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) OF ABOUT 80-100 KJ/CM² OVER THE SAME AREA AND FAVOURABLE PHASE OF MADDEN JULIAN OSCILLATION (MJO) INDEX LYING IN PHASE 3 WITH AMPLITUDE MORE THAN 1 FAVOURED FURTHER INTENSIFICATION THE DEPRESSION INTO A DEEP DEPRESSION. ALSO, THE HIGH POSITIVE VORTICITY, LOW VERTICAL WIND SHEAR AND FAVOURABLE UPPER LEVEL DIVERGENCE HELPED IN THE MAINTENANCE OF ACTIVE CONVECTION. A ZONE OF POSITIVE VORTICITY ($150 \times 10^{-6} \text{S}^{-1}$) AT LOWER LEVEL LIES AROUND THE SYSTEM CENTRE OVER NORTHWEST BOB. THE POSITIVE VORTICITY ZONE IS EXTENDING UPTO 500 HPA LEVEL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE $20 \times 10^{-5} \text{S}^{-1}$ IS SEEN OVER NORTHWEST BOB AND ADJOINING ODISHA COAST. THE VERTICAL WIND SHEAR (VWS) IS MODERATE (15-20 KTS) OVER THE NORTHWEST BOB.

THOUGH THE SYSTEM HAS ENTERED LAND, THE PREVAILING ACTIVE MONSOON CONDITIONS, THE EXISTING ENVIRONMENTAL CONDITIONS AND MODEL GUIDANCE ARE INDICATING THAT THE DEEP DEPRESSION WILL MAINTAIN ITS INTENSITY FOR A FEW MORE HOURS BEFORE WEAKENING INTO A DEPRESSION. THE UPPER TROPOSPHERIC RIDGE RUNS NEAR 22°N, TO THE NORTH OF THE SYSTEM. SYSTEM IS BEING STEERED BY THE WINDS IN MIDDLE AND UPPER TROPOSPHERE TOWARD WESTNORTHWEST. IT WILL CONTINUE TO STEER SO DURING NEXT 2-3-DAYS.

The next bulletin will be issued at 0600 UTC of 13th September, 2021.

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OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL AND ODISHA COAST BASED ON 0000 UTC OF 13TH SEPTEMBER, 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

