



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.12.2017

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 07.12.2017 BASED ON 0000 UTC OF 07.12.2017.

BAY OF BENGAL & ANDAMAN SEA:

DEPRESSION OVER SOUTHEAST BAY OF BENGAL:

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED LIKELY NORTHWARDS WITH A SPEED OF ABOUT 20 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0000 UTC OF TODAY, THE 07 DECEMBER, 2017 NEAR LATITUDE 11.1° N AND LONGITUDE 88.0 °E, ABOUT 930 KM TO THE EAST-SOUTHEAST OF MACHILLIPATNAM AND 970 KM SOUTH-SOUTHEAST OF GOPALPUR. THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9TH DECEMBER MORNING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING CENTRAL BAY, SOUTHWEST BAY AND ANDAMAN SEA. THE MAXIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. SATELLITE IMAGERIE INDICATES THE CONVECTIVE CLOUDS HAVE ORGANISED DURING PAST 6 HOURS AND DURING PAST 24 HOURS THE CONVECTIVE CLOUD OF COSOLIDATIVE. HOWEVER THE MAJORITY OF CONVECTION IS DISPLACED NORTHWARD FROM LOW LEVEL CIRCULATION CENTER.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM² OVER THE SYSTEM AREA. IT IS DECREASING TO THE NORTH. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND $100 \times 10^{-6} \text{ S}^{-1}$ TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT $40 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS.

EVEN THOUGH THE SYSTEM PRESENTLY LIES OVER FAVOURABLE OCEAN THERMAL CONDITIONS, IT IS EMBEDDED IN A HIGH WIND SHEAR REGIME. HENCE, THE SYSTEM IS NOT EXPECTED TO INTENSIFY RAPIDLY AND ITS INTENSIFICATION WILL BE LIMITED UP TO DEEP DEPRESSION. FURTHER, WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. AS A RESULT THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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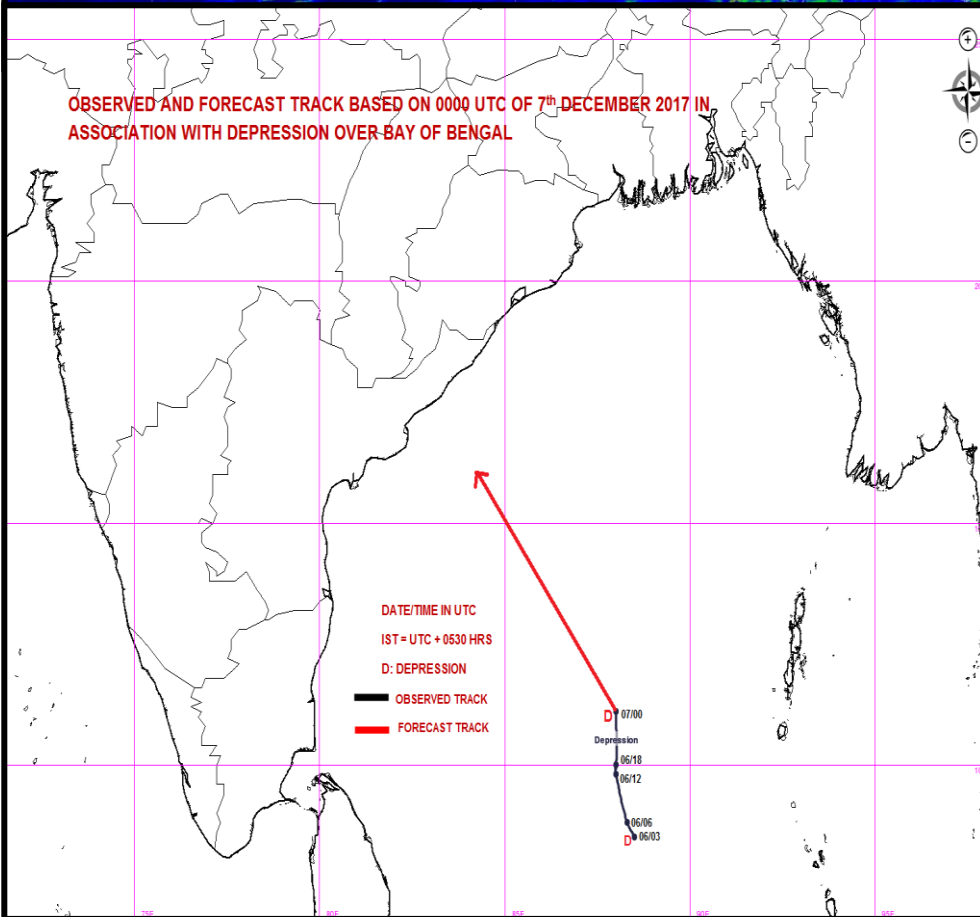
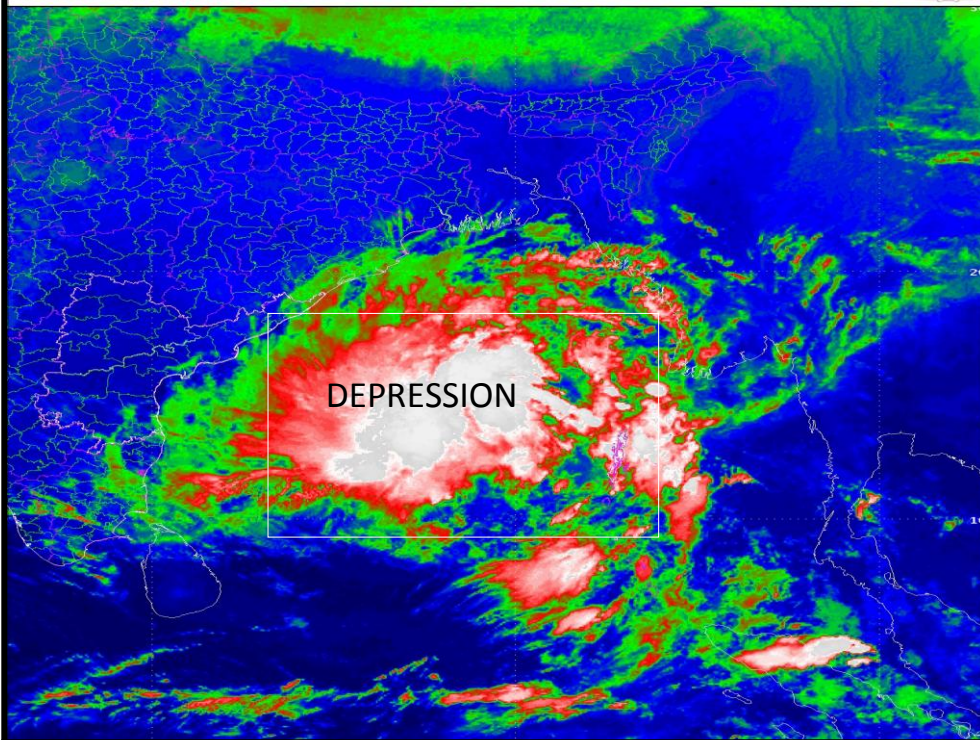
REACHES NEAR THE COAST. UNDER THE INFLUNCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BVENGAL, THE NORTHWESTERLY TO NORTH-NORTHWESTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM AND DEEP LAYER MEAN ALSO SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHOBHIT KATIYAR)
SCIENTIST 'B', RSMC NEW DELHI

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