



**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 1500 UTC OF 07.12.2017 BASED ON 1200 UTC OF 07.12.2017.

BAY OF BENGAL & ANDAMAN SEA:

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 11 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 07 DECEMBER, 2017 OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 12.8° N AND LONGITUDE 87.7 °E, ABOUT 770 KM SOUTH-SOUTHEAST OF GOPALPUR (43049) AND 800 KM TO THE EAST-SOUTHEAST OF MACHILIPATNAM (43185). 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 AROUND 9TH DECEMBER MORNING.

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 WEST CENTRAL AND ADJOINING SOUTH EAST BAY OF BENGAL. SATELLITE IMAGERY INDICATES THE MAJORITY OF CONVECTION LIES TO THE NORTH OF LOW LEVEL CIRCULATION CENTER.

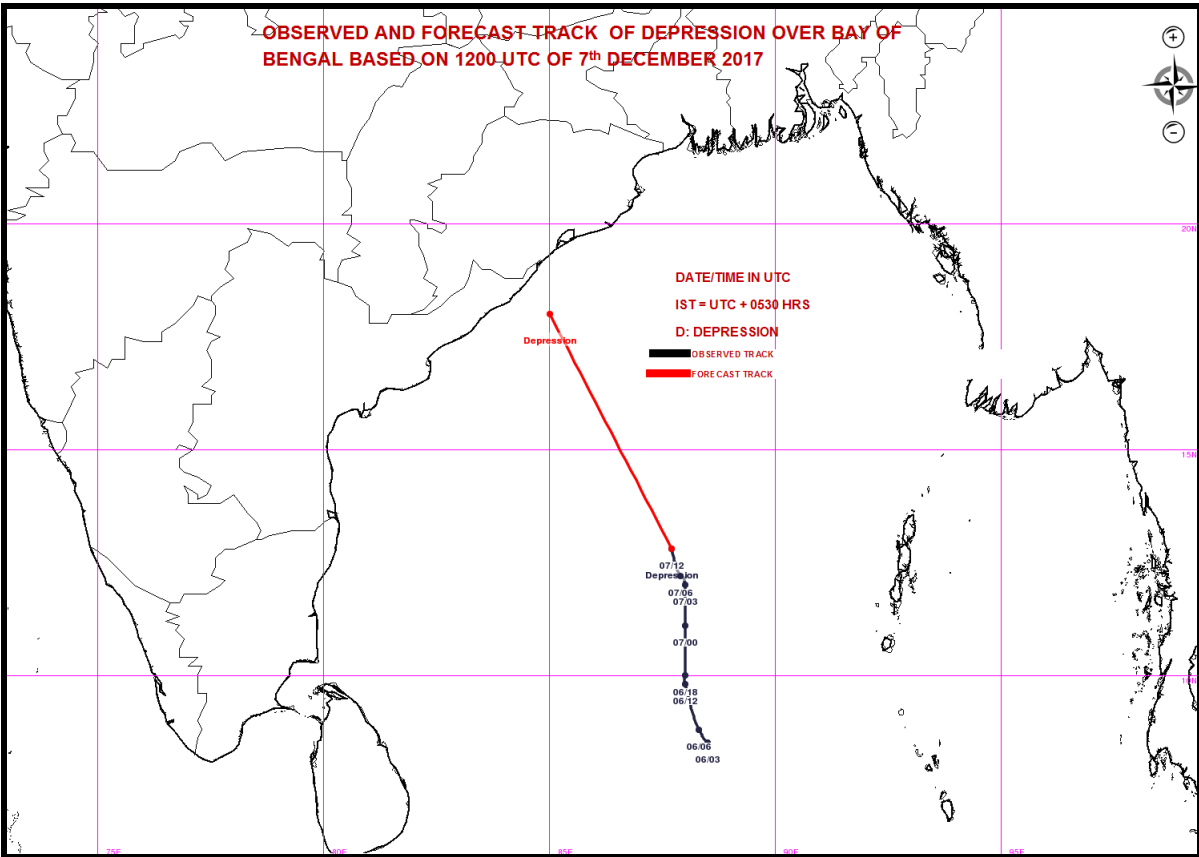
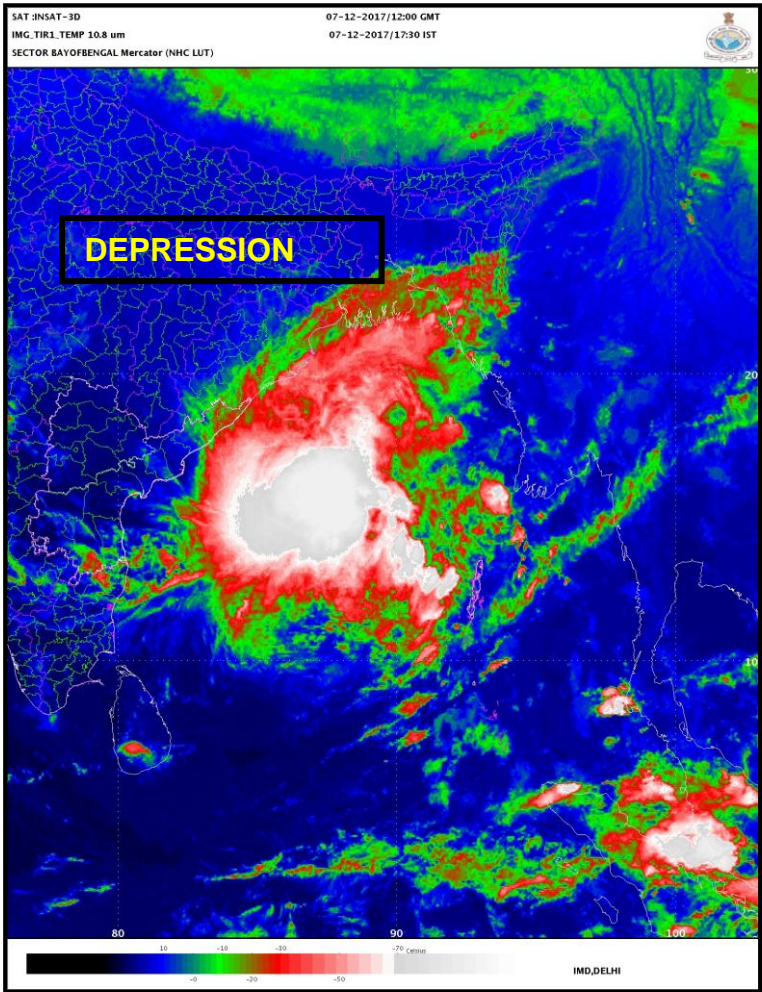
THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 28-29 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. 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 SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND $40 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ 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. CONSIDERING ALL THESE, INTENSIFICATION OF THE SYSTEM WILL BE LIMITED UPTO DEEP DEPRESSION. THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR THE COAST. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL, THE SOUTH-SOUTHEASTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. DEEP LAYER MEAN WIND ALSO SUGGEST SIMILAR MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHIBIN B)
SCIENTIST 'B'
RSMC NEW DELHI

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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