



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 16.05.2020

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 16.05.2020 BASED ON 0900 UTC OF 16.05.2020.

DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD INTENSIFIED INTO A DEEP DEPRESSION OVER THE SAME REGION.

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF 5 KMPH DURING PAST 06 HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED OVER THE SAME REGION AT 0900 UTC OF TODAY, THE 16TH MAY, 2020 NEAR LATITUDE 10.9°N AND LONGITUDE 86.3°E, ABOUT 1040 KM SOUTH OF PARADIP (42976), 1200 KM SOUTH-SOUTHWEST OF DIGHA (42901) AND 1300 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984). IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 12 HOURS AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS AND RAPIDLY INTENSIFY INTO A VERY SEVERE CYCLONIC STORM BY 0300 UTC OF 18TH. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS INITIALLY TILL 17TH MAY AND THEN RE-CURVE NORTH-NORTHEASTWARDS ACROSS NORTHWEST BAY OF BENGAL TOWARDS WEST BENGAL AND ADJOINING ODISHA COASTS DURING 18TH TO 20TH MAY 2020.

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
16.05.20/0900	10.9/86.3	50-60 GUSTING TO 70	DEEP DEPRESSION
16.05.20/1200	11.2/86.2	55-65 GUSTING TO 75	DEEP DEPRESSION
16.05.20/1800	11.8/86.1	60-70 GUSTING TO 80	CYCLONIC STORM
17.05.20/0000	12.3/86.0	80-90 GUSTING TO 100	CYCLONIC STORM
17.05.20/0600	12.8/86.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
17.05.20/1800	13.9/86.1	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
18.05.20/0600	14.9/86.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
18.05.20/1800	16.0/86.2	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
19.05.20/0600	17.4/86.5	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
19.05.20/1800	19.0/87.0	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
20.05.20/0600	20.8/87.5	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
20.05.20/1800	22.9/88.2	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
21.05.20/0600	25.0/88.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0900 UTC OF TODAY, THE 16TH MAY, INTENSITY OF THE SYSTEM IS T 2.0. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BETWEEN LATITUTDE 5.0°N & 13.5°N AND LONGITUDE 82.0°E & 90.0°E. MINIMUM CLOUD TOP TEMPERATURE (CTT) MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

AT 0900 UTC OF 16TH MAY, A BOUY LOCATED AT 13.2°N/84.1°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1003 HPA AND MEAN SURFACE WIND SPEED OF 60°/10.0 KNOTS AND ANOTHER BOUY LOCATED AT 13.4°N/87.1°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1001.6 HPA AND MEAN SURFACE WIND SPEED OF 80°/15.0 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 2 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE TILL 17TH MAY WITH AMPLITUDE REMAINING MORE THAN 1 AND BECOMING LESS THAN 1 THEREAFTER IN PHASE 3. THUS MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE THE BAY OF BENGAL (BOB) FOR NEXT 5 DAYS.

CONSIDERING THE SEA CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 30-31°C OVER ENTIRE BOB AND OVER ANDAMAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM² OVER MAJOR PARTS OF SOUTH & CENTRAL BOB AND EASTERN PARTS OF ANDAMAN SEA. IT IS ABOUT 60-80 KJ/CM² OVER REMAINING PARTS OF ANDAMAN SEA AND BOB TO THE NORTH OF 17°N AND IS DECREASING TOWARDS EXTREME NORTH BOB.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE ENHANCED POSITIVE POSITIVE VORTICITY ZONE IS BEING MAINTAINED DURING PAST 6 HOURS (MORE THAN 150X10⁻⁶SEC⁻¹) AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. THE LOWER LEVEL CONVERGENCE ZONE OVER SOUTHEAST BOB HAS INCREASED AND IS AROUND 30X10⁻⁵SEC⁻¹ AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS THE SAME DURING THE PERIOD (40X10⁻⁵SEC⁻¹) OVER SOUTHEAST BOB. VERTICAL WIND SHEAR (VWS) HAS DECREASED AND IS LOW TO MODERATE (15-20 KTS) AROUND THE SYSTEM CENTRE. IT IS HIGH REMAINING SAME TO THE NORTH OF 10.0°N ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 11.5°N OVER BOB. TOTAL PRECIPITABLE WATER IMAGERY AT 0741 UTC OF 16TH MAY INDICATES WARM MOIST AIR INCURSION OVER THE SYSTEM AREA.

VARIOUS NUMERICAL MODELS INCLUDING ECMWF, IMD GFS, NCEP GFS, GEFS, NEPS AND NCUM ARE INDICATING ARE INDICATING RAPID INTENSIFICATION OF THE SYSTEM INTO SEVERE CATEGORY AND MOVEMENT TOWARDS NORTH BAY OF BENGAL UPTO 20TH MAY TOWARDS WEST BENGAL AND ADJOINING ODISHA COAST. CONSIDERING ALL THE ABOVE, THE SYSTEM IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM BY DURING NEXT 12 HOURS, FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS AND THEN RAPIDLY INTO A VERY SEVRE CYCLONIC STORM BY 0300 UTC OF 18TH. IT IS VERY LIKELY TO MOVE NORTH NORTHWESTWARDS INITIALLY TILL 17TH MAY AND THEN RE-CURVE NORTH-NORTHEASTWARDS TOWARDS WEST BENGAL- ODISHA COASTS DURING 18TH TO 20TH MAY.

(SUNITHA DEVI)
SCIENTIST-E, RSMC, NEW DELHI

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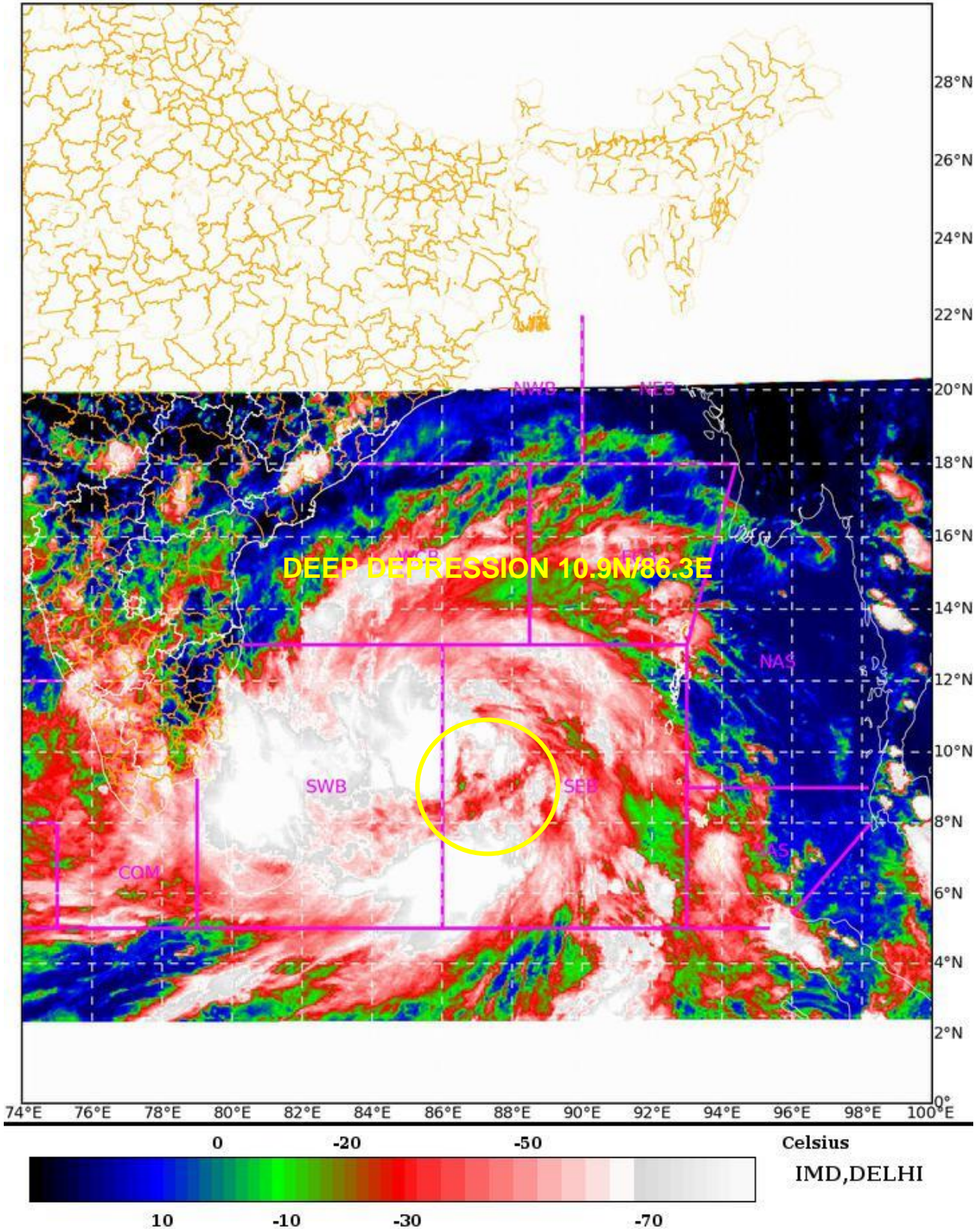
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SAT : INSAT-3DR IMG 16-05-2020/(0949 to 0953) GMT

IMG_TIR1_TEMP 10.8 um 16-05-2020/(1519 to 1523) IST

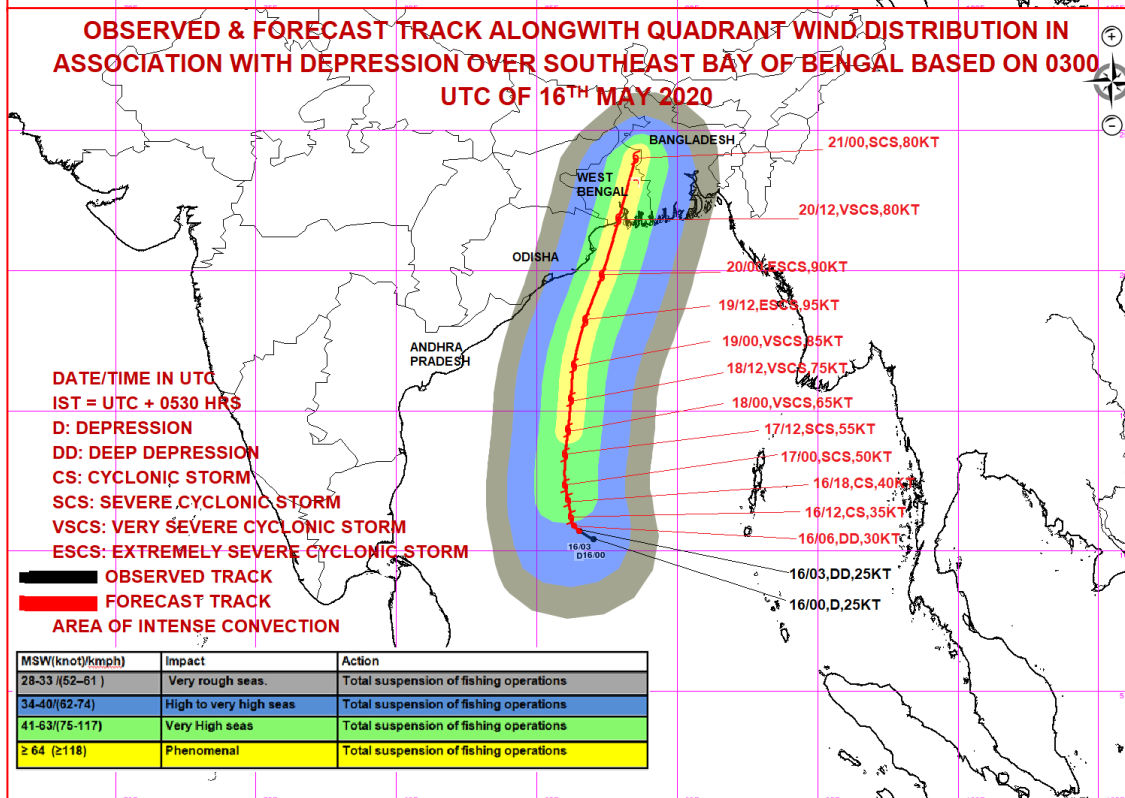
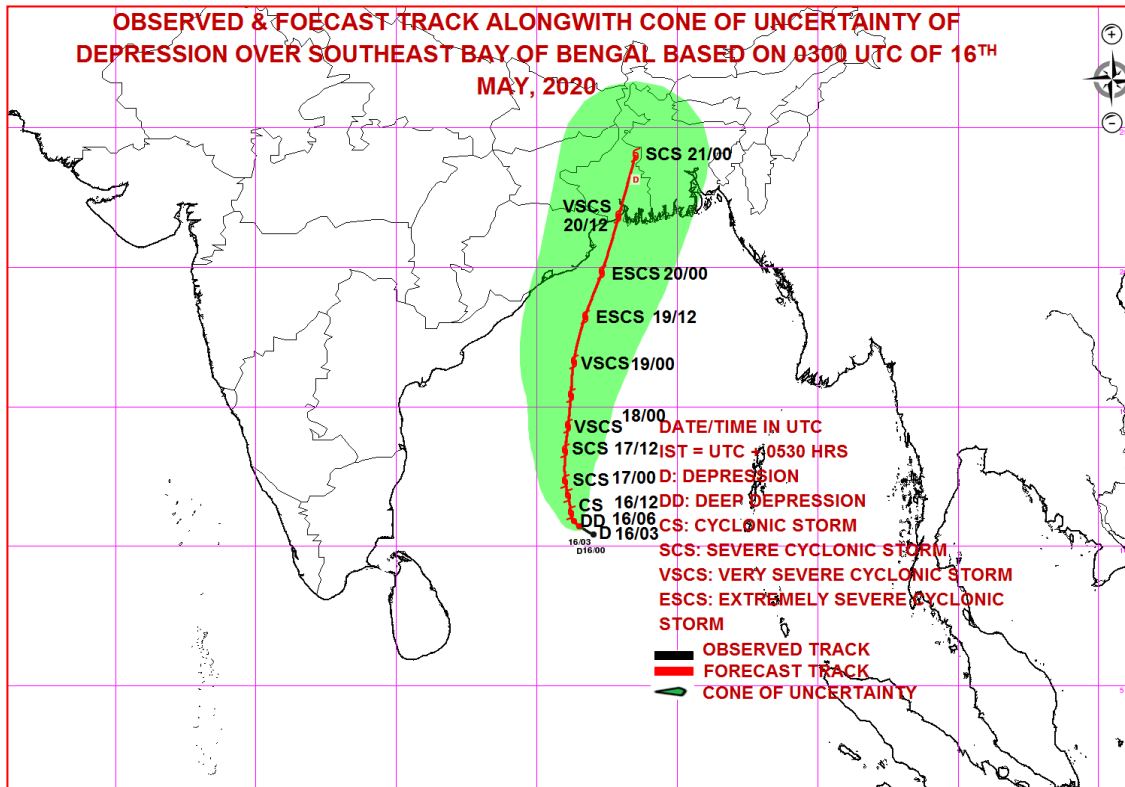


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