



**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 0300 UTC OF 16.05.2020 BASED ON 0000 UTC OF 16.05.2020.

DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

LATEST SATELLITE IMAGERIES SCATTEROMETER AND BUOY OBSERVATIONS INDICATE THAT YESTERDAY'S WELL MARKED LOW PRESSURE AREA HAS CONCENTRATED INTO A DEPRESSION OVER SOUTHEAST BAY OF BENGAL AND LAY CENTRED AT 0000 UTC OF TODAY, THE 16TH MAY, 2020 NEAR LATITUDE 10.4°N AND LONGITUDE 87.0°E, ABOUT 1100 KM SOUTH OF PARADIP (42976) (ODISHA), 1250 KM SOUTH OF DIGHA (42901) (WEST BENGAL) AND 1330 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984) (BANGLADESH). IT IS VERY LIKELY TO INTENSIFY RAPIDLY INTO A CYCLONIC STORM BY 1200 UTC OF TODAY AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS.

IT IS VERY LIKELY TO MOVE NORTH NORTHWESTWARDS INITIALLY TILL 17TH MAY AND THEN RE-CURVE NORTH-NORTHEASTWARDS TOWARDS WEST BENGAL COAST DURING 18TH TO 20TH MAY.

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
16.05.20/0000	10.4/87.0	40-50 gusting to 60	Depression
16.05.20/0600	10.7/86.9	50-60 gusting to 70	Deep Depression
16.05.20/1200	11.0/86.8	60-70 gusting to 80	Cyclonic Storm
16.05.20/1800	11.6/86.7	75-85 gusting to 95	Cyclonic Storm
17.05.20/0000	12.3/86.6	90-100 gusting to 110	Severe Cyclonic Storm
17.05.20/1200	13.4/86.5	100-110 gusting to 120	Severe Cyclonic Storm
18.05.20/0000	14.3/86.4	120-130 gusting to 145	Very Severe Cyclonic Storm
18.05.20/1200	15.4/86.3	135-145 gusting to 160	Very Severe Cyclonic Storm
19.05.20/0000	16.6/86.4	155-165 gusting to 180	Very Severe Cyclonic Storm
19.05.20/1200	18.2/86.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
20.05.20/0000	19.8/87.3	160-170 gusting to 190	Extremely Severe Cyclonic Storm
20.05.20/1200	21.8/87.9	145-155 gusting to 170	Very Severe Cyclonic Storm
21.05.20/0000	24.0/88.5	110-120 gusting to 135	Severe Cyclonic Storm

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE 16TH MAY, INTENSITY T1.5. CONVECTION AND ORGANISATION HAS INCREASED FURTHER. ASSTD BKN LOW/MED CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BETWEEN LATITUTDE 6.0N TO 13.0N LONGITUDE 83.0E TO 90.0E. MINIMUM CLOUD TOP TEMPERATURE (CTT) MINUS 93 DEG C

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA.

AT 0000 UTC OF 16TH MAY, A BOUY LOCATED AT 6.6°N/88.3°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1003 HPA AND MEAN SURFACE WIND SPEED OF 190°/ 13.6 KNOTS AND A SHIP LOCATED AT 5.8°N/91.6°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1000.5 HPA AND MEAN SURFACE WIND SPEED OF 190°/ 26 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 POSITIVE HIGHER POSITIVE VORTICITY ZONE HAS INCREASED IT'S STRENGTH DURING PAST 24 HOURS ($50-100 \times 10^{-6} \text{SEC}^{-1}$) OVER SOUTHEAST BOB WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. THE CONVERGENCE ZONE OVER SOUTHEAST BOB INCREASED DURING PAST 24 HOURS ($30 \times 10^{-5} \text{SEC}^{-1}$). UPPER LEVEL DIVERGENCE IS THE SAME DURING THE PERIOD ($40 \times 10^{-5} \text{SEC}^{-1}$) OVER SOUTHEAST BOB AND IS NORTH-SOUTH ORIENTED. VERTICAL WIND SHEAR (VWS) IS MODERATE (10-15 KTS) TO THE SOUTH OF 10°N OVER SOUTHWEST AND ADJOINING SOUTHEAST BOB. IT IS BECOMING HIGH TO THE NORTH OF OF 10.0°N AND ANDAMAN SEA. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 10.0°N OVER BOB.

THIS FORECAST IS BASED ON THE CONSENSUS AMONG VARIOUS NUMERICAL MODELS. ALL THESE MODELS ARE INDICATING RAPID INTENSIFICATION OF THE SYSTEM INTO SEVERE CATEGORY AND MOVEMENT TOWARDS NORTH BAY OF BENGAL UPTO 20TH MAY. THUS THE SYSTEM IS VERY LIKELY TO INTENSIFY RAPIDLY INTO A CYCLONIC STORM BY 1200 UTC OF TODAY AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH NORTHWESTWARDS INITIALLY TILL 17TH MAY AND THEN RE-CURVE NORTH-NORTHEASTWARDS TOWARDS WEST BENGAL COAST DURING 18TH TO 20TH MAY.

(ANANDA DAS)
SCIENTIST-E, RSMC, NEW DELHI

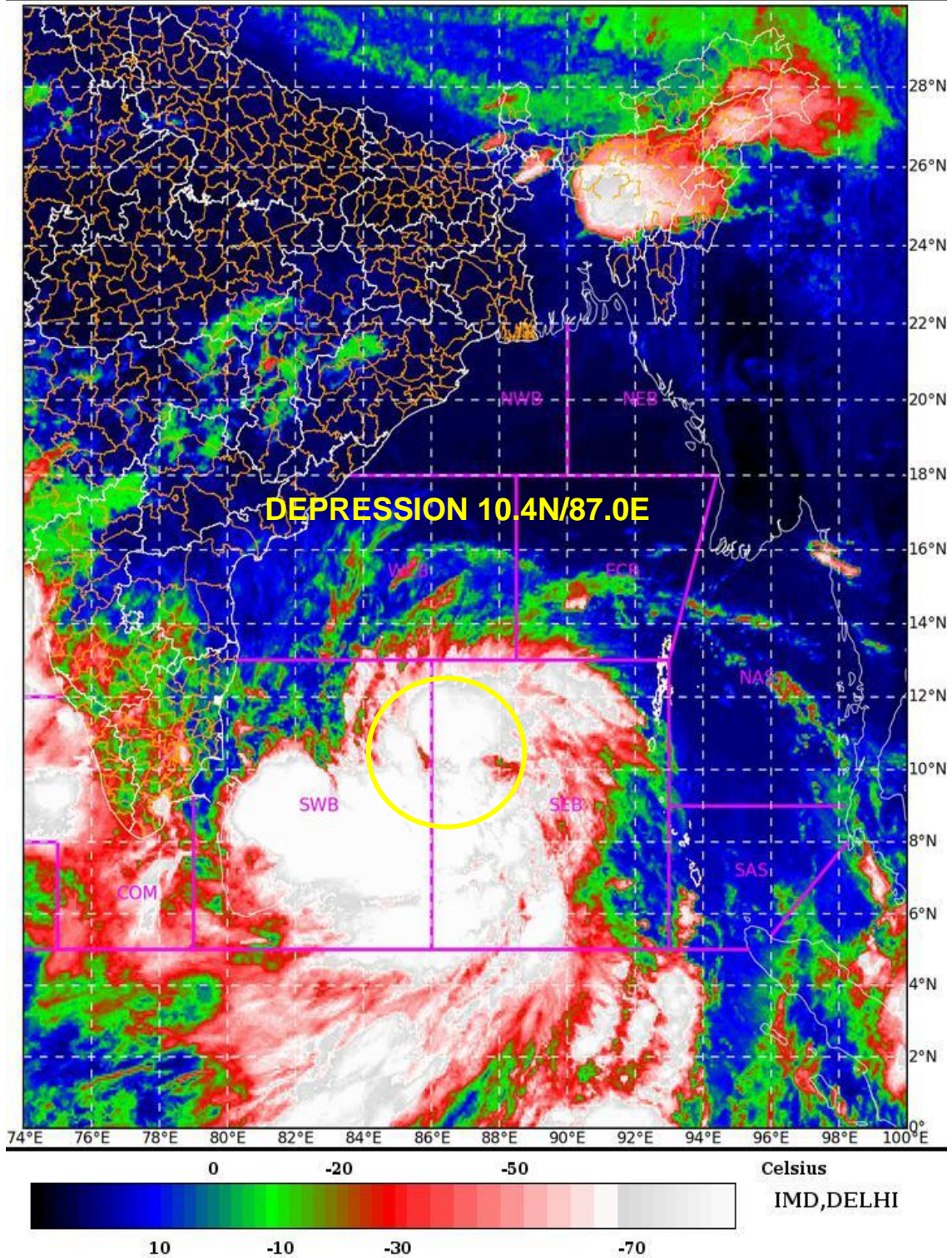
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

SAT : INSAT-3D IMG 16-05-2020/(0130 to 0156) GMT

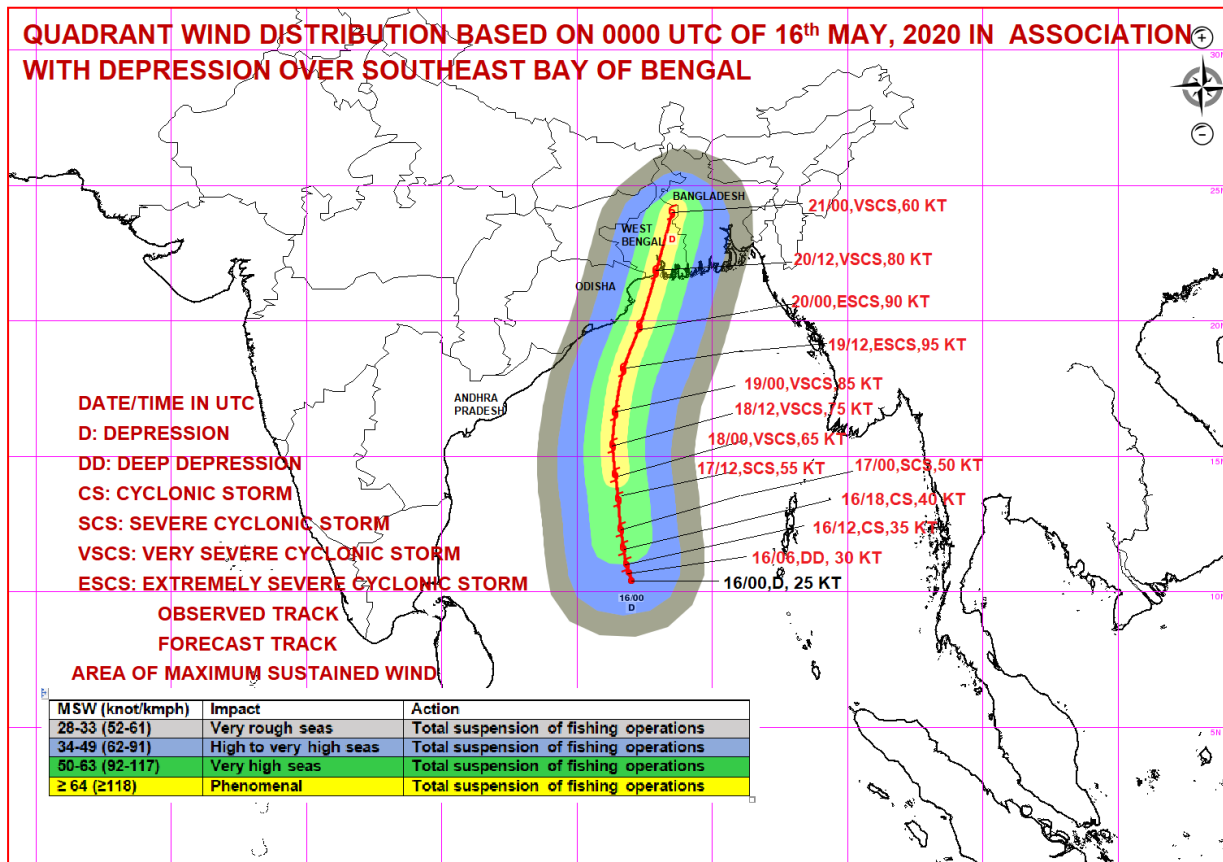
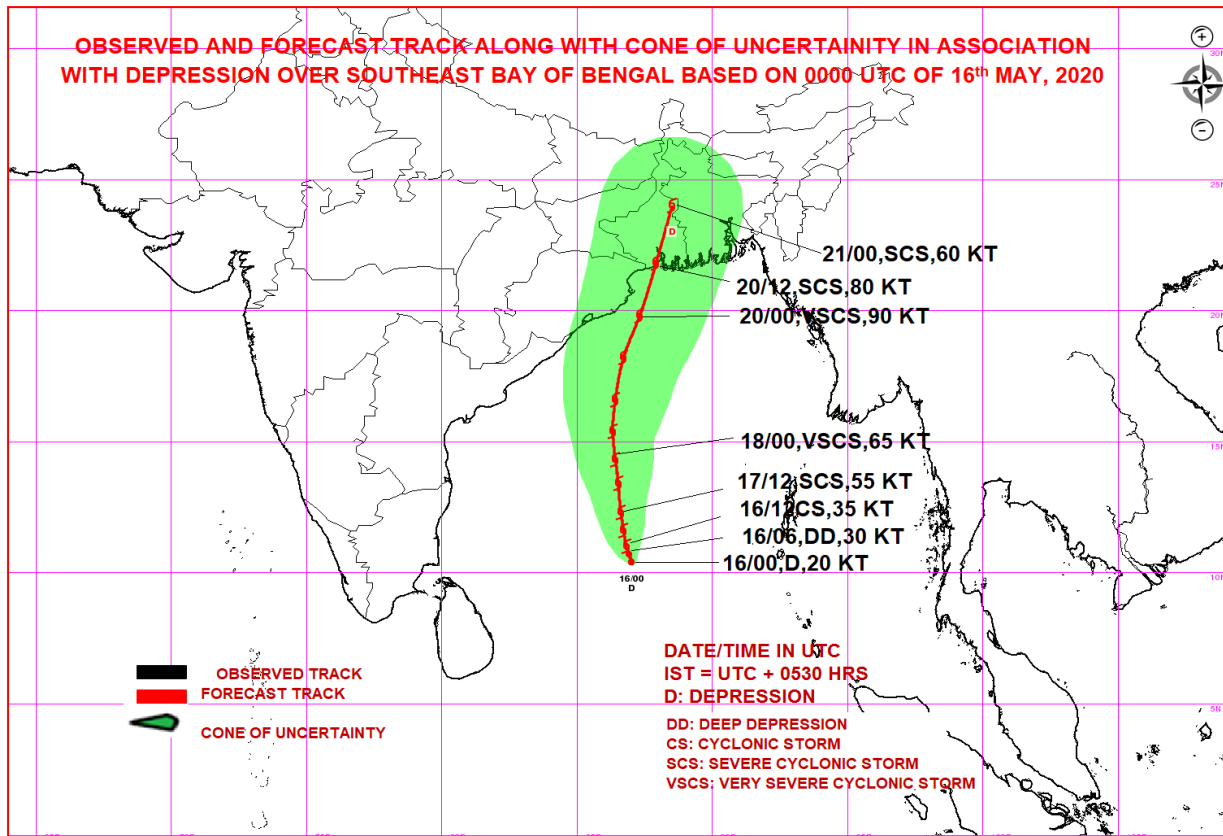
IMG_TIR1_TEMP 10.8 um 16-05-2020/(0700 to 0726) IST

L1C Mercator



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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