



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 4

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 4 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0000 UTC OF 17.05.2020 BASED ON 2100 UTC OF 16.05.2020.

SUB: THE CYCLONIC STORM 'AMPHAN' (PRONOUNCED AS UM-PUN) OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD.

THE CYCLONIC STORM '**AMPHAN**' (PRONOUNCED AS **UM-PUN**) OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD MOVED NORTH-NORTHWESTWARDS WITH SPEED OF 06 KMPH DURING PAST 06 HOURS AND LAY CENTRED OVER THE SAME REGION AT 2100 UTC OF 16TH MAY, 2020 NEAR LATITUDE 11.3°N AND LONGITUDE 86.1°E, ABOUT 1000 KM SOUTH OF PARADIP (42976), 1160 KM SOUTH-SOUTHWEST OF DIGHA (42901) AND 1260 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND INTO A VERY SEVERE CYCLONIC STORM BY 18TH MORNING. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 24 HOURS AND THEN RE-CURVE NORTH-NORTHEASTWARDS ACROSS NORTHWEST BAY OF BENGAL TOWARDS WEST BENGAL AND ADJOINING NORTH 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
16.05.20/2100	11.3/86.1	75-85 GUSTING TO 95	CYCLONIC STORM
17.05.20/0000	11.7/86.0	80-90 GUSTING TO 100	CYCLONIC STORM
17.05.20/0600	12.2/86.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
17.05.20/1200	12.8/86.0	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
17.05.20/1800	13.4/86.0	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
18.05.20/0600	14.5/86.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
18.05.20/1800	15.9/86.2	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
19.05.20/0600	17.5/86.6	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
19.05.20/1800	19.2/87.1	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
20.05.20/0600	21.1/87.6	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
20.05.20/1800	23.3/88.2	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

21.05.20/0600	25.2/88.7	80-90 GUSTING TO 100	CYCLONIC STORM
21.05.20/1800	26.2/89.1	40-50 GUSTING TO 100	DEPRESSION

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 2100 UTC OF THE 16TH MAY, THE CURRENT INTENSITY OF THE SYSTEM IS T2.5 ASSOCIATED WITH CDO PATTERN. MINIMUM CLOUD TOP TEMPERATURE IS -93 DEG CELCIUS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER BAY BETWEEN LAT 8.0°N TO 15.0°N LONG 81.5°E TO 89.0°E.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 994 HPA.

AT 2100 UTC OF 16TH MAY, A BOUY (23094) LOCATED AT 13.5°N/84.1°E REPORTED A MEAN SEA LEVEL PRESSURE OF 999.7 HPA AND MEAN SURFACE WIND SPEED OF 40°/12 KNOTS AND ANOTHER BOUY (23459) LOCATED AT 13.9°N/87.0°E REPORTED A MEAN SEA LEVEL PRESSURE OF 999.4 HPA AND MEAN SURFACE WIND SPEED OF 50°/18 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 AND HENCE THE INTENSIFICATION OF THE SYSTEM.

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

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE ENHANCED POSITIVE VORTICITY ZONE IS BEING MAINTAINED DURING PAST 6 HOURS (MORE THAN 200X10⁻⁶SEC⁻¹) AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. THE LOWER LEVEL CONVERGENCE ZONE IS AROUND 20X10⁻⁵SEC⁻¹ LOCATED OVER SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE OF 30X10⁻⁵SEC⁻¹ LOCATED OVER SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) HAS FURTHER DECREASED AND IS LOW TO MODERATE (10-15 KTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO NORTH OF LAT. 15 N ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 12.0 N OVER BOB. TOTAL PRECIPITABLE WATER IMAGERY AT 1041 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 RAPID INTENSIFICATION OF THE SYSTEM INTO VERY SEVERE CATEGORY AND MOVEMENT TOWARDS WEST BENGAL AND ADJOINING ODISHA AND BANGLADESH COASTS. THE FORECAST IS BASED AS THE CONCENSUS FROM VARIOUS MODELS.

(D R PATTANAİK)
SCIENTIST-F, RSMC, NEW DELHI

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SAT : INSAT-3D IMG

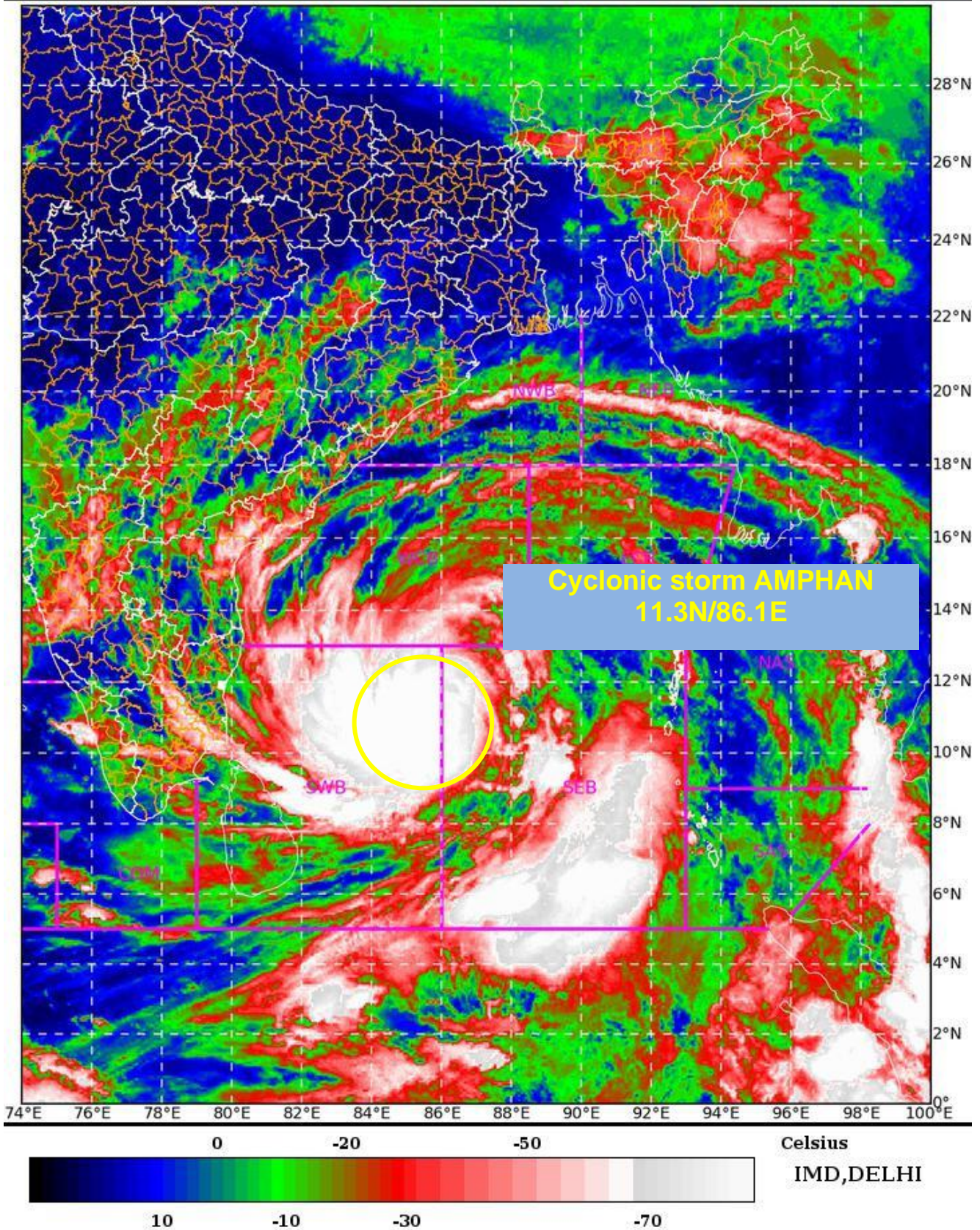
16-05-2020/(2300 to 2326) GMT

IMG_TIR1_TEMP 10.8 um

17-05-2020/(0430 to 0456) IST

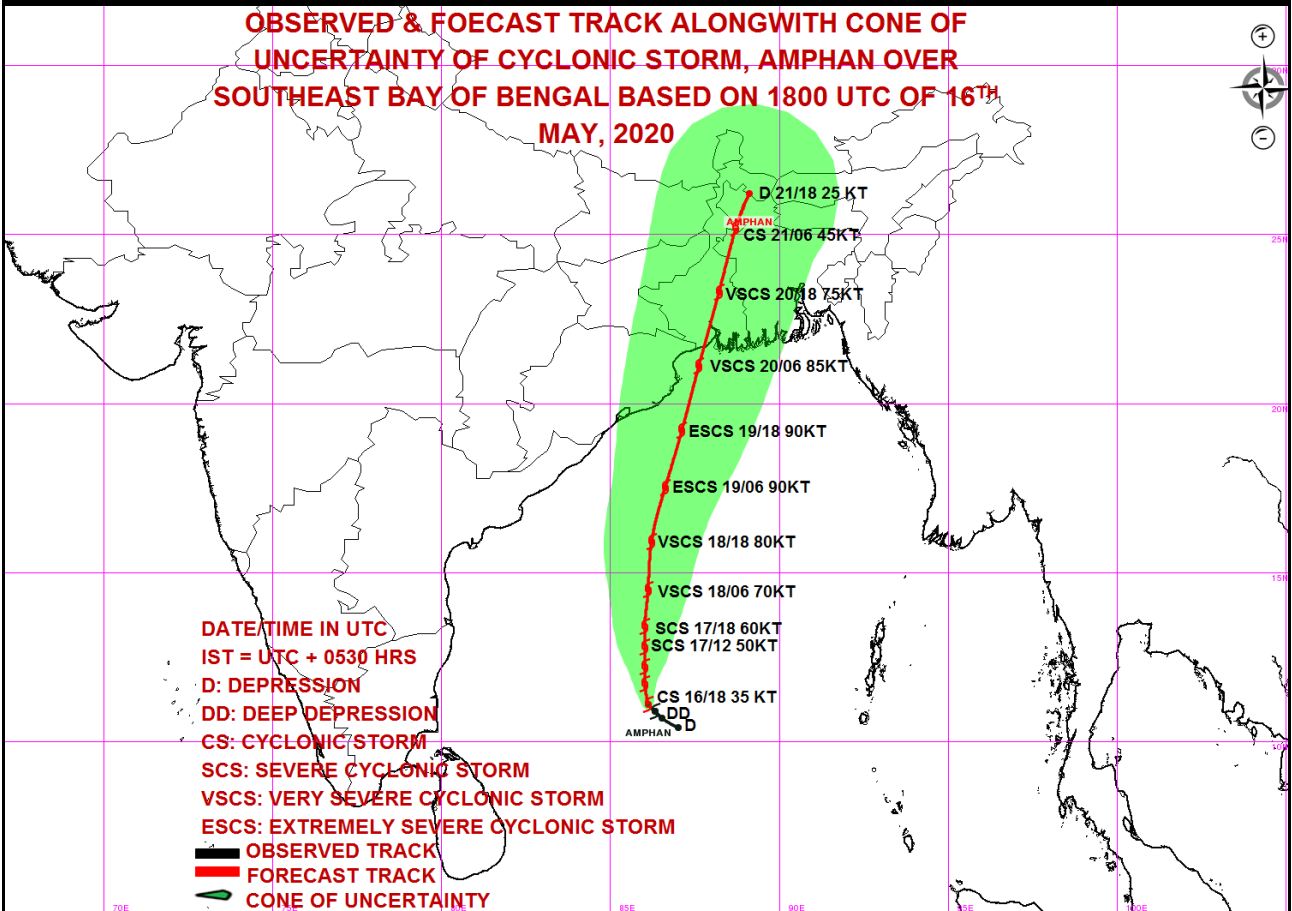
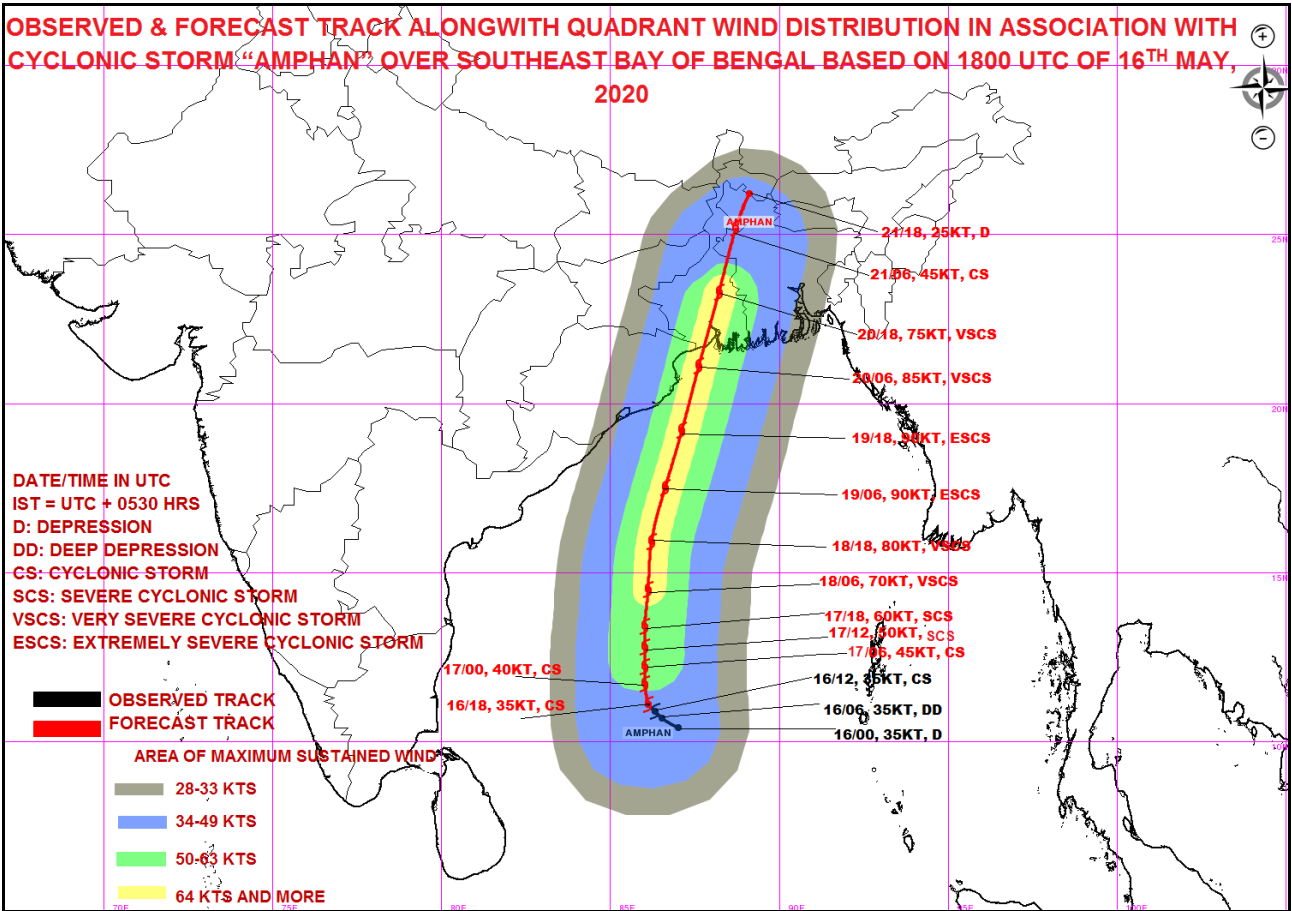


L1C Mercator



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