



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY BULLETIN NO. 8

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. 8 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 17.05.2020 BASED ON 0900 UTC OF 17.05.2020.

SUB: VERY SEVERE CYCLONIC STORM 'AMPHAN' (PRONOUNCED AS UM-PUN) OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL

THE SEVERE CYCLONIC STORM 'AMPHAN' (PRONOUNCED AS **UM-PUN**) OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL AND NEIGHBOURHOOD MOVED SLOWLY NORTHWARDS WITH SPEED OF 05 KMPH DURING PAST 06 HOURS, FURTHER INTENSIFIED INTO A **VERY SEVERE CYCLONIC STORM** AND LAY CENTRED AT 0900 UTC OF 17TH MAY, 2020 NEAR LATITUDE 11.7°N AND LONGITUDE 86.0°E OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL, ABOUT 960 KM SOUTH OF PARADIP (42976), 1110 KM SOUTH-SOUTHWEST OF DIGHA (42901) AND 1230 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS SLOWLY DURING NEXT 12 HOURS AND THEN RE-CURVE NORTH-NORTHEASTWARDS AND MOVE FAST ACROSS NORTHWEST BAY OF BENGAL AND CROSS WEST BENGAL AND BANGLADESH COASTS BETWEEN DIGHA (42901) AND HATIYA ISLANDS (41963) DURING 0900-1200 UTC OF 20TH MAY 2020 AS A VERY SEVERE CYCLONIC STORM.

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
17.05.20/0900	11.7/86.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
17.05.20/1200	12.0/86.0	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
17.05.20/1800	12.7/86.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
18.05.20/0000	13.5/86.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
18.05.20/0600	14.0/86.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
18.05.20/1800	15.2/86.3	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
19.05.20/0600	16.6/86.7	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
19.05.20/1800	18.4/87.2	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
20.05.20/0600	20.4/87.7	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
20.05.20/1800	22.4/88.2	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
21.05.20/0600	24.2/88.7	70-80 GUSTING TO 90	CYCLONIC STORM

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0900 UTC OF 17TH MAY, IT HAS FURTHER INTENSIFIED AND THE CURRENT INTENSITY OF THE SYSTEM IS **T4.0** ASSOCIATED WITH A BANDING EYE PATTERN IN THE VISIBLE IMAGERY. MINIMUM CLOUD TOP TEMPERATURE IS -93 DEG CELCIUS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER BAY BETWEEN LAT 7.5°N TO 14.0°N LONG 81.0°E TO 89.0°E.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 980 HPA.

AT 0900 UTC OF 17TH MAY, A BOUY (23459) LOCATED AT 14.0°N/86.6°E REPORTED A MEAN SEA LEVEL PRESSURE OF 996 HPA AND MEAN SURFACE WIND SPEED OF 80°/29 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS IN PHASE 2 WITH AMPLITUDE MORE THAN 1 DURING 17TH-20TH MAY. IT WILL REMAIN IN PHASE 3 WITH AMPLITUDE MORE THAN 1 DURING NEXT 3 DAYS. THUS MJO PHASE AND AMPLITUDE WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL DURING NEXT 5 DAYS.

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 30X10⁻⁵SEC⁻¹ LOCATED OVER SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL HAS DECREASED AND IS ABOUT 30X10⁻⁵SEC⁻¹ LOCATED AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) CONINUES TO REMAIN MODERATE TO HIGH (20-25 KTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE NORTH OF LAT. 15N ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE LIES NEAR 13.0 N OVER BOB. AT PRESENT THE SYSTEM IS MOVING NEAR NORTHWARD ALONG THE AXIS OF THE RIDGE AND WILL CONTINUE THE SAME MOVEMENT FOR NEXT 24 HOURS. SUBSEQUENTLY, THE SYSTEM WILL MOVE TO THE NORTH OF THE RIDGE AXIS AND WILL START RECURVING NORTH/NORTHEASTWARDS AND MOVE FASTER.

TOTAL PRECIPITABLE WATER IMAGERY OF 17TH MAY INDICATES CONTINUED WARM MOIST AIR INCURSION OVER THE SYSTEM AREA, MAINLY IN ITS NORTHWESTERN SECTOR.

VARIOUS NUMERICAL MODELS INCLUDING ECMWF, IMD GFS, NCEP GFS, GEFS, NEPS AND NCUM ARE INDICATING FURTHER INTENSIFICATION OF THE SYSTEM INTO AN EXTREMELY SEVERE CATEGORY AND MOVEMENT TOWARDS WEST BENGAL AND BANGLADESH COASTS. THE FORECAST IS BASED ON THE CONCENSUS FROM VARIOUS MODELS.

(RK JENAMANI)
SCIENTIST-F, RSMC, NEW DELHI

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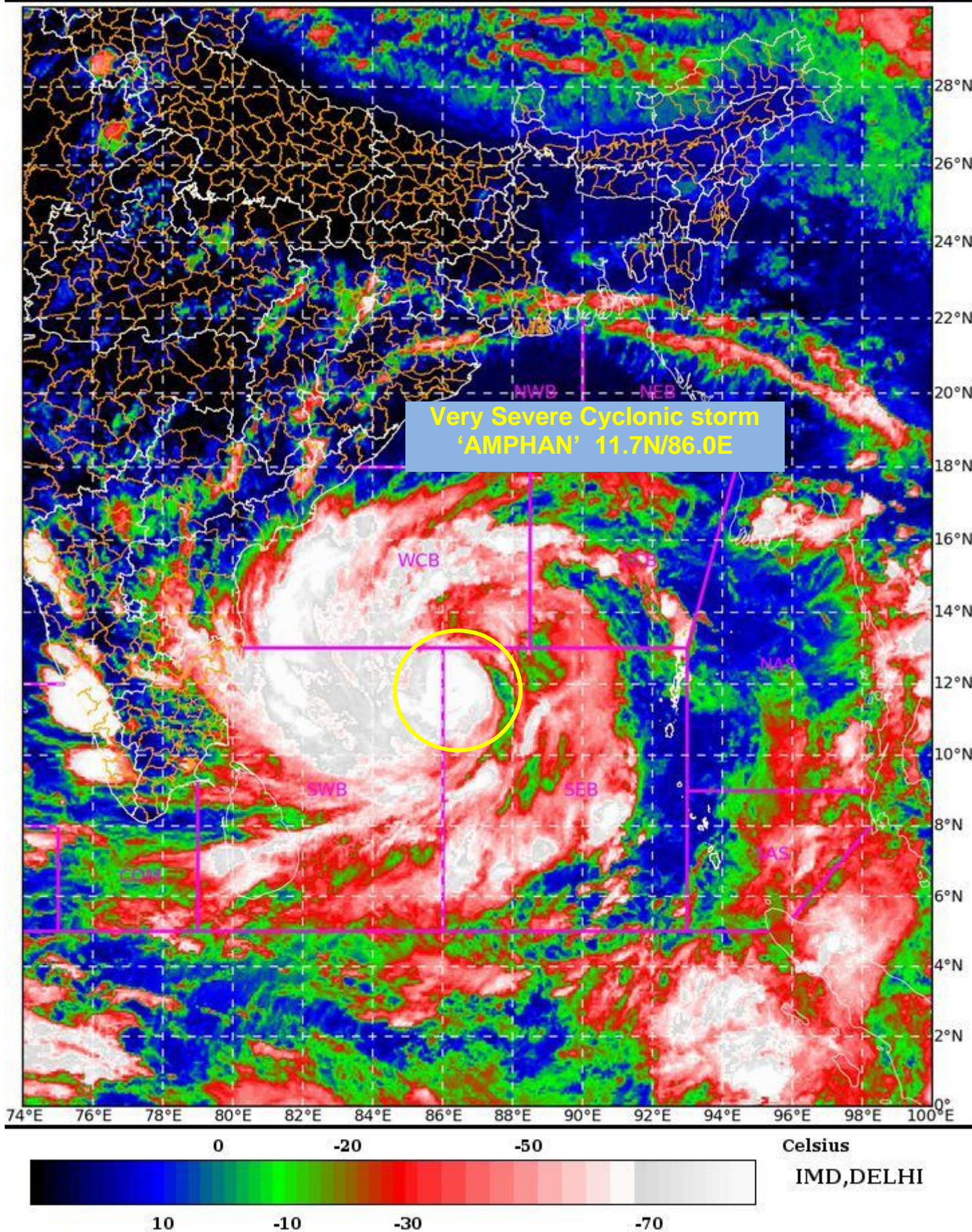
SAT : INSAT-3D IMG

17-05-2020/(1030 to 1056) GMT

IMG_TIR1_TEMP 10.8 um

17-05-2020/(1600 to 1626) IST

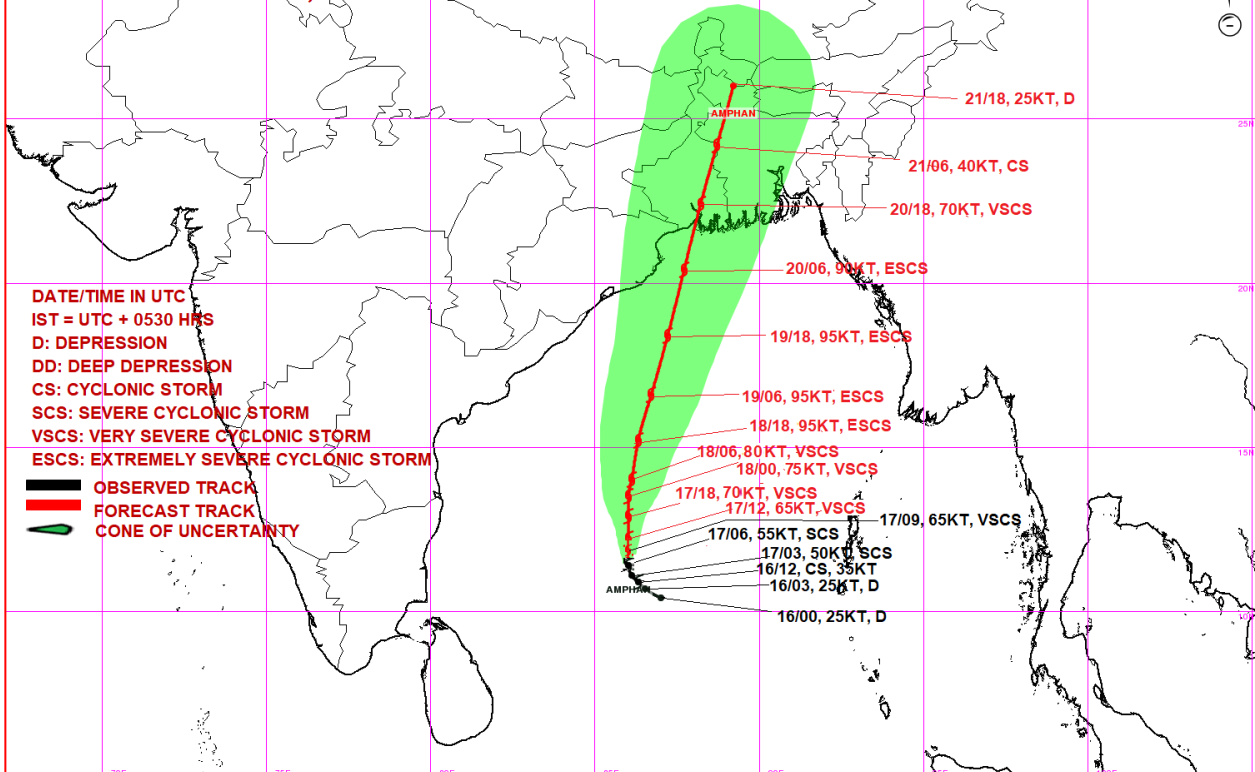
L1C Mercator



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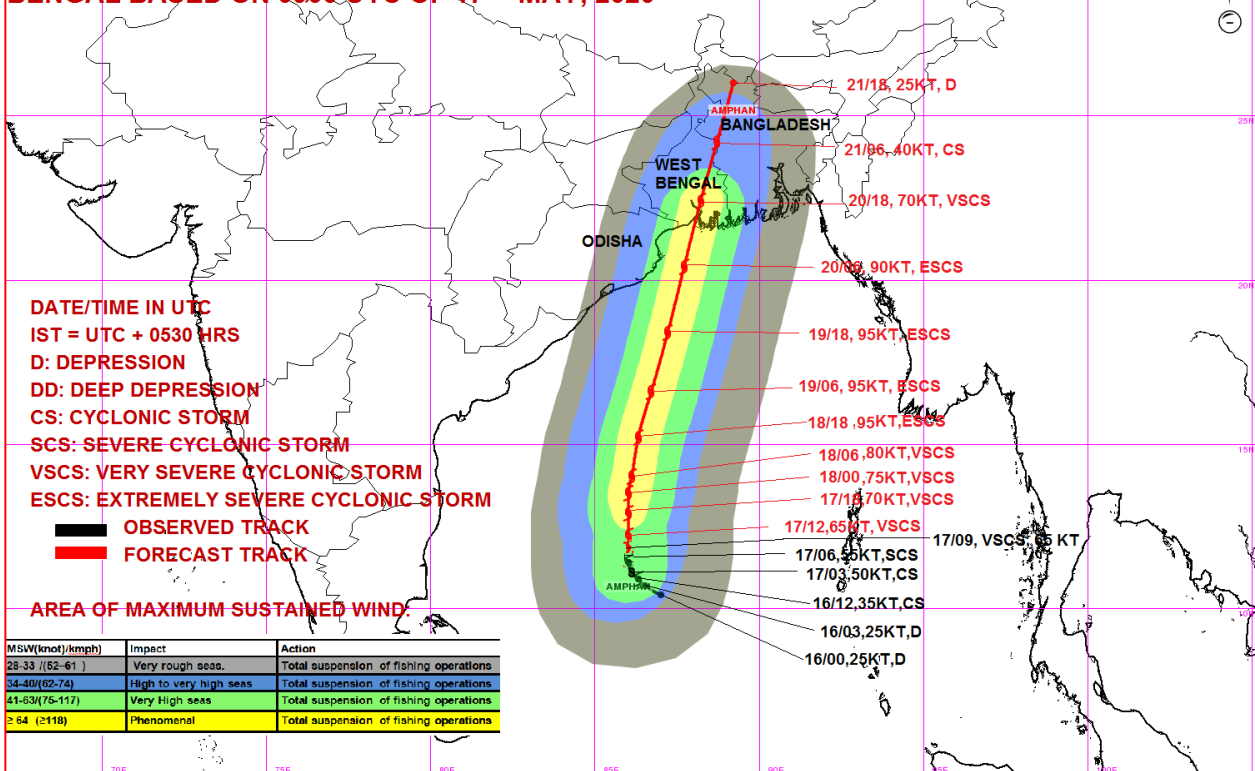
OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM, AMPHAN OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL BASED ON 0900 UTC OF 17TH MAY, 2020



DATE/TIME IN UTC
 IST = UTC + 0530 HRS
 D: DEPRESSION
 DD: DEEP DEPRESSION
 CS: CYCLONIC STORM
 SCS: SEVERE CYCLONIC STORM
 VSCS: VERY SEVERE CYCLONIC STORM
 ESCS: EXTREMELY SEVERE CYCLONIC STORM

OBSERVED TRACK
 FORECAST TRACK
 CONE OF UNCERTAINTY

OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM, AMPHAN OVER CENTRAL PARTS OF SOUTH BAY OF BENGAL BASED ON 0900 UTC OF 17TH MAY, 2020



DATE/TIME IN UTC
 IST = UTC + 0530 HRS
 D: DEPRESSION
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OBSERVED TRACK
 FORECAST TRACK

AREA OF MAXIMUM SUSTAINED WIND:

MSW(knot)/kmph	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-40 (62-74)	High to very high seas	Total suspension of fishing operations
41-53 (75-117)	Very High seas	Total suspension of fishing operations
≥ 54 (≥118)	Phenomenal	Total suspension of fishing operations

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