



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 35

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. 35 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2100 UTC OF 20.05.2020 BASED ON 1800 UTC OF 20.05.2020.

SUB: SUPER CYCLONIC STORM 'AMPHAN' (PRONOUNCED AS UM-PUN) CROSSED WEST BENGAL – BANGLADESH COASTS

THE VERY SEVERE CYCLONIC CYCLONIC STORM 'AMPHAN' (PRONOUNCED AS **UM-PUN**) OVER WEST BENGAL COAST MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 28 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF TODAY, THE 20TH MAY 2020 OVER BANGLADESH AND ADJOINING WEST BENGAL NEAR LAT. 23.3°N AND LONG. 89.0°E AS A SEVERE CYCLONIC STORM ABOUT 110 KM NORTHEAST OF KOLKATA (42807), 240 KM NORTHEAST OF DIGHA (42901), 200 KM NORTH-NORTHEAST OF SAGAR ISLANDS (42903) AND 190 KM NORTHWEST OF KHEPUPARA (41984). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A CYCLONIC STORM DURING NEXT 06 HOURS.

THE SYSTEM IS NOW BEING CONTINUOUSLY TRACKED BY THE DOPPLER WEATHER RADAR (DWR) AT KOLKATA (WEST BENGAL).

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
20.05.20/1800	23.3/89.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
21.05.20/0000	24.6/89.3	60-70 GUSTING TO 80	CYCLONIC STORM
21.05.20/0600	26.0/90.3	30-40 GUSTING TO 50	DEPRESSION

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 1800 UTC OF 20TH MAY SHOWS THE VORTEX LIES OVER THE LAND IN AEAS OF WEST BENGAL COAST ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER BAY BETWEEN LATITUDE 19.0°N TO 27.0°N LONGITUDE 85.0°E TO 92.5°E. WALL CLOUDS MINIMUM CLOUD TOP TEMPERATURE -93 DEG C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. THE SEA CONDITION IS PHENOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS **988** HPA.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS (DWR) AT KOLKATTA (43049). THE SYSTEM IS AT DISTANCE 70 KM SOUTH OF KOLKATA RADAR.

AT 1800 UTC OF 20TH MAY, KOLKATTA (43049) REPORTED MEAN SEA LEVEL PRESSURE OF 987.8 HPA AND WIND DIRECTION/SPEED AS 230°/27 KNOTS . CHUADANGA (41926), REPORTED MEAN SEA LEVEL PRESSURE OF 978.0 HPA AND WIND DIRECTION/SPEED AS 360°/35 KNOTS,

THE SYSTEM ENTERING THE COAST. CONSIDERING THE ENVIRONMENTAL CONDITIONS, WITH THE POSITIVE VORTICITY MAINTAINING AT $(250-300) \times 10^{-6} \text{ SEC}^{-1}$ AROUND THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. THE LOWER LEVEL CONVERGENCE IS $(30-40) \times 10^{-5} \text{ SEC}^{-1}$ AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS ALSO REDUCED TO $10 \times 10^{-5} \text{ SEC}^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) IS MODERATE TO HIGH (25-30 KTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO 30-40 KTS AT NORTH OF 23°N ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE IS AT NORTH AND NOW LIES NEAR 22.0°N OVER BAY OF BENGAL. AT PRESENT THE SYSTEM IS MOVING NORTH-NORTHEASTWARD ALONG THE PERIPHERY OF THE ANTICYCLONE LIES OVER MAYNMAR.

VARIOUS NUMERICAL MODELS INCLUDING ECMWF, IMD GFS, NCEP GFS, GEFS, NEPS AND NCUM ARE INDICATING THE SYSSTEM IS LIKELY TO MOVE ACROSS NORTHWEST BAY OF BENGAL TOWARDS WEST BENGAL AND BANGLADESH COASTS AS AN EXTREMELY SEVERE CYCLONIC STORM DURING 1000-1200 UTC OF 20TH MAY 2020. THE FORECAST IS BASED ON THE CONSENSUS FROM VARIOUS MODELS.

STORM SURGE GUIDANCE

STORM SURGE OF ABOUT 4-5 METERS ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF SOUTH & NORTH 24 PARGANAS AND ABOUT 3-4 METERS OVER THE LOW LYING AREAS OF EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING THE TIME OF LANDFALL (FIGURE ENCLOSED).

(V R DURAI)
SCIENTIST-E, RSMC, NEW DELHI

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

SAT : INSAT-3D IMG

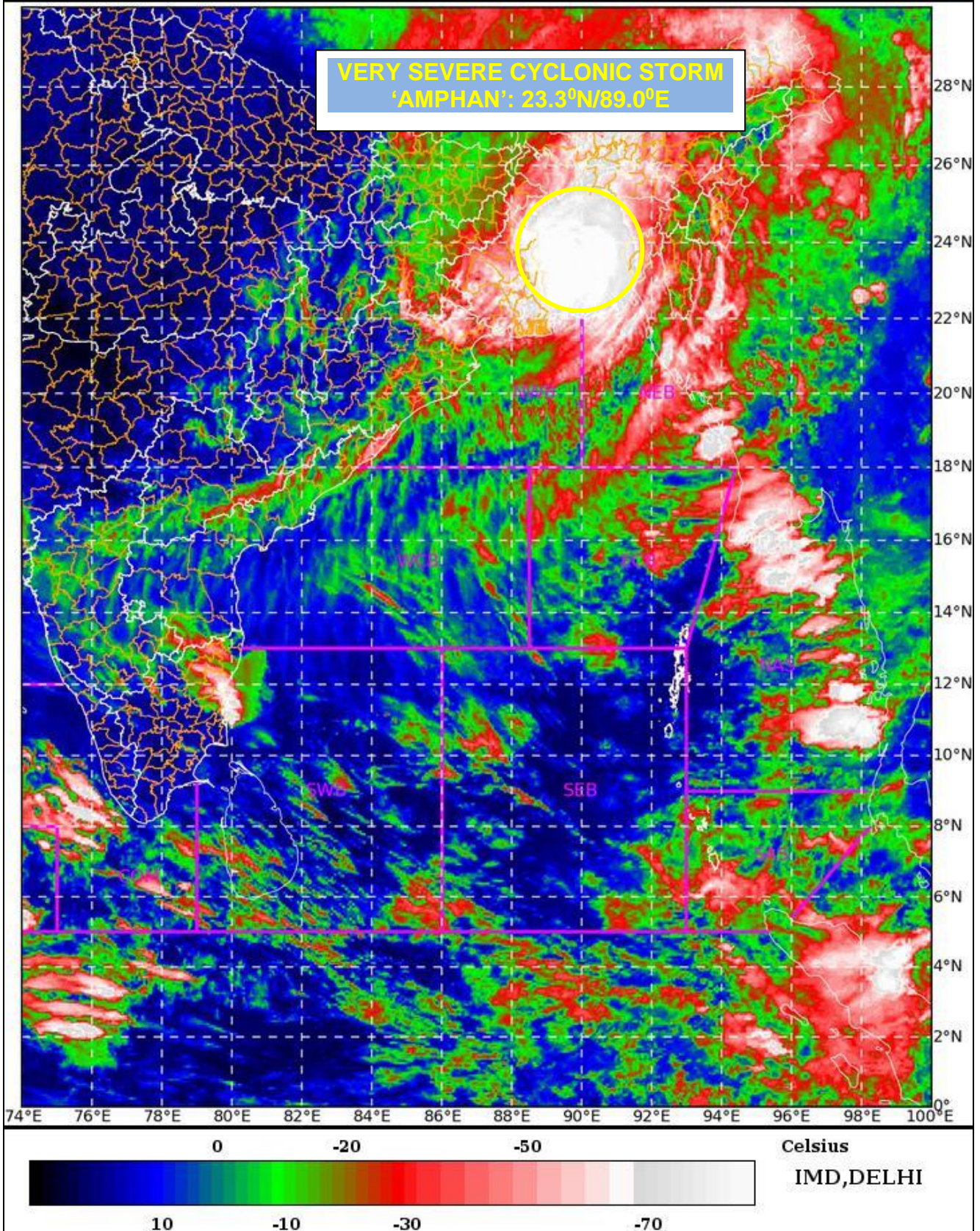
20-05-2020/(1900 to 1926) GMT

IMG_TIR1_TEMP 10.8 um

21-05-2020/(0030 to 0056) IST



L1C Mercator

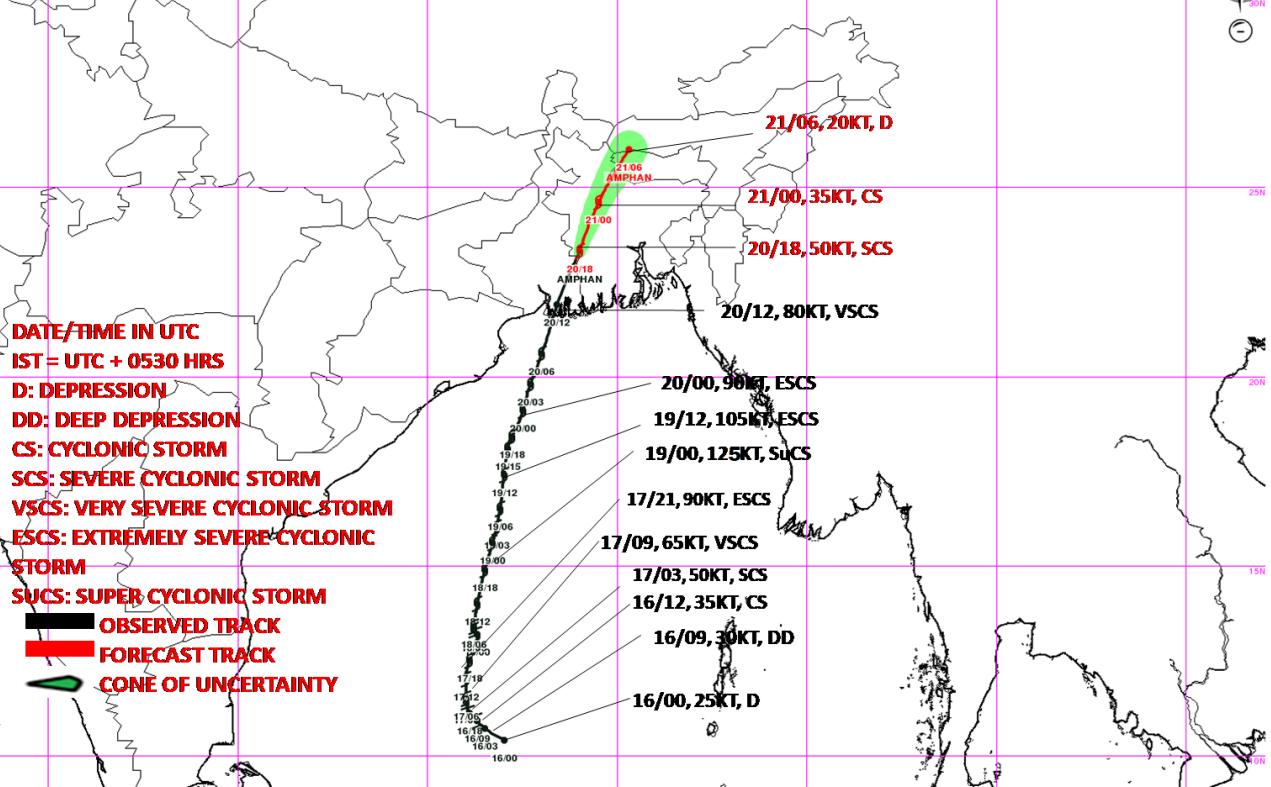


Legend: WCB – Westcentral Bay of Bengal
NWB – Northwest Bay of Bengal

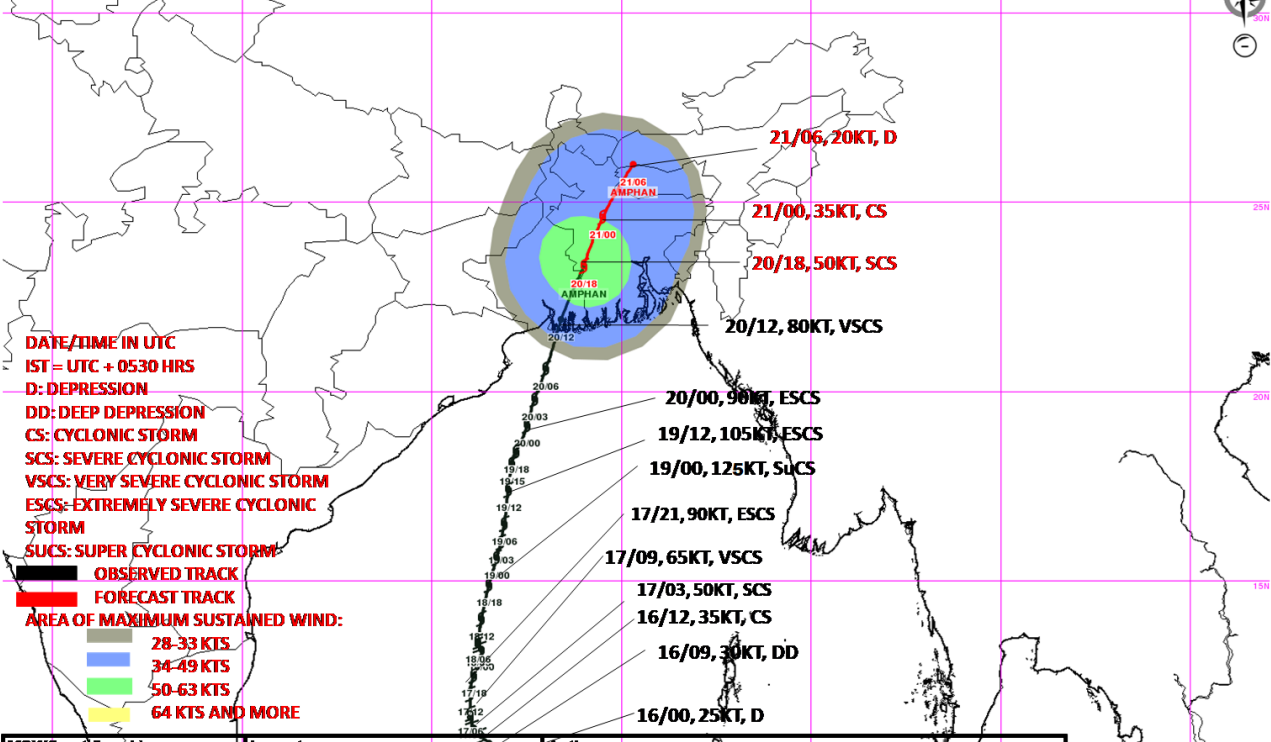
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONIC STORM 'AMPHAN' OVER ADJOINING BANGLADESH AND WEST BENGAL BASED ON 1800 UTC OF 20TH MAY, 2020



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONIC STORM , AMPHAN OVER ADJOINING BANGLADESH AND WEST BENGAL BASED ON 1800 UTC OF 20TH MAY, 2020



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
41-63 (75-117)	Very High seas	Total suspension of fishing operations

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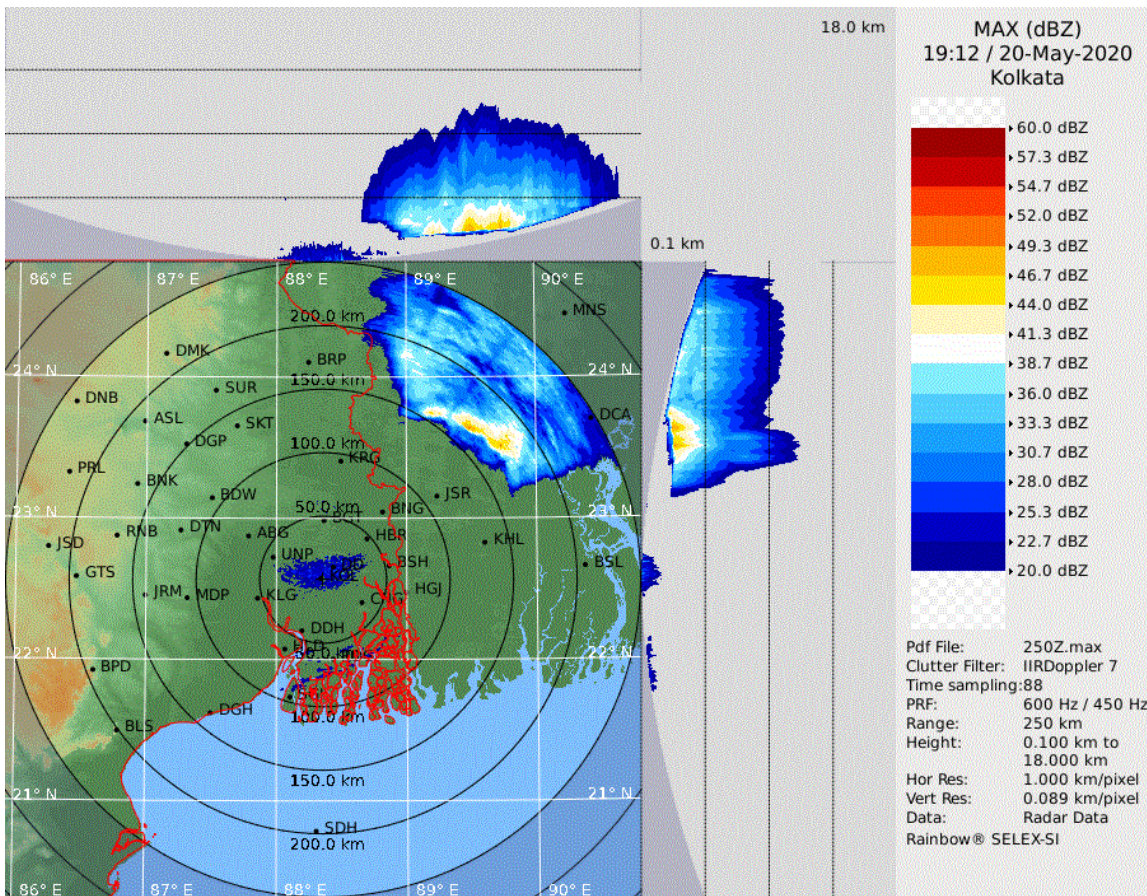


Figure: Reflectivity of Kolkata Doppler Weather Radar at 1912 UTC of 20th May 2020

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