REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY NO. 3

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 17.11.2023

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
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. 3 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0930 UTC OF 17.11.2023 BASED ON 0600 UTC OF 17.11.2023

SUB: CYCLONIC STORM "MIDHILI" (PRONOUNCED AS "MIDHILI") OVER NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL

THE CYCLONIC STORM "MIDHILI" (PRONOUNCED AS "MIDHILI") OVER NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 26 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 17TH NOVEMBER OVER NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL NEAR LATITUDE 21.2°N AND LONGITUDE 89.5°E, ABOUT 210 KM EAST-SOUTHEAST OF DIGHA (42901), 110 KM SOUTHWEST OF KHEPUPARA (41984) AND 270 KM WEST-SOUTHWEST OF CHITTAGONG (41977).

IT IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST CLOSE TO KHEPUPARA WITH WIND SPEED OF 60-70 KMPH GUSTING TO 80 KMPH DURING 1200-1800 UTC OF 17TH NOVEMBER, 2023.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
17.11.23/0600	21.2/89.5	70-80 KMPH GUSTING TO 90 KMPH	CYCLONIC STORM
17.11.23/1200	22.3/90.2	60-70 KMPH GUSTING TO 80 KMPH	CYCLONIC STORM
17.11.23/1800	22.9/90.8	55-65 KMPH GUSTING TO 75 KMPH	DEEP DEPRESSION
18.11.23/0000	23.7/91.5	40-50 KMPH GUSTING TO 60 KMPH	DEPRESSION

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 40 KNOTS GUSTING TO 50 KNOTS. THE WINDS ARE RELATIVELY STRONGER IN NORTHEAST SECTOR. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA. HIGH SEA CONDITION IS PREVAILING OVER NORTH BAY OF BENGAL AND ALONG & OFF BANGLADESH COAST AND ADJOINING MYANMAR COAST AND LIKELY TO CONTINUE TILL 1800 UTC OF 17TH NOVEMBER. VERY ROUGH TO ROUGH SEA CONDITION IS LIKELY OVER ALONG & OFF WEST BENGAL BAY OF BENGAL TILL 18TH NOVEMBER MORNING.

INTENSITY OF THE SYSTEM IS CHARACTERISED AS T2.5. CLOUDS ASSOCIATED WITH THE CYCLONIC STORM ARE ORGANISED IN SHEAR PATTERN. BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST BAY OF BENGAL, SOUTHWEST & EAST BANGLADESH, TRIPURA, AND NORTH MYANMAR. MINIMUM CLOUD TOP TEMPERATURE IS -80^{0}C. MODERATE TO INTENSE CONVECTION LAY OVER REST OF NORTHEAST STATES AND NORTH BANGLADESH. LATEST IMAGERY INDICATES THE SPIRAL BANDS OVER COASTAL BANGLADESH HENCE LAND INTERACTION HAS STARTED. THE CONVECTIVE CLOUD MASS ALSO LIES OVER MIZORAM AND TRIPURA WHICH MAY LEAD TO INTENSE PRECIPITATION OVER BANGLADESH, TRIPURA AND MIZORAM. ASCAT IMAGERY AT 0414 UTC INDICATED 40 KT WINDS NEAR BANGALDESH COAST OVER NORTH BAY OF BANGAL.

KHEPUPARA AT 0600 UTC REPORTED LOWEST MEAN SEA LEVEL PRESSURE OF 1003.9 HPA.

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1-2 METER HEIGHT ABOVE THE ASTRONOMICAL TIDE IS LIKE TO INUNDATE LOW LYING AREAS OF BANGLADESH NEAR THE LANDFALL POINT AT THE TIME OF LANDFALL.

Remarks:
MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 1 WITH AMPLITUDE CLOSE TO 1. IT WOULD MOVE TO PHASE 2 FROM 19TH NOVEMBER ONWARDS, WITH AMPLITUDE BECOMING MORE THAN 1. SEA SURFACE TEMPERATURE IS AROUND 28°C OVER THE SYSTEM AREA. THE TROPICAL CYCLONE HEAT POTENTIAL IS 70-80 KJ/CM^2 OVER NORTH BAY OF BANGAL. THE LOW LEVEL RELATIVE POSITIVE VORTICITY IS SAME AND IS AROUND 150 X10^{-6} S^{-1} TO THE SOUTHEAST OF SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. THE POSITIVE LOW LEVEL CONVERGENCE IS ABOUT 20X10^{-5}S^{-1} TO THE SOUTHEAST OF SYSTEM CENTER. POSITIVE UPPER LEVEL DIVERGENCE IS SAME AND IS ABOUT 40 X10^{-5} S^{-1} TO THE NORTHEAST OF SYSTEM AREA. CONSIDERING THE FACT THAT THE SYSTEM IS EXTENDING UPTO 500 HPA LEVEL, THE MIDDLE LEVEL SHEAR IS CONTRIBUTING TO THE MAINTENANCE OF INTENSITY OF THE SYSTEM. THUS MIDDLE LEVEL SHEAR (10-20 KNOTS) OVER NORTH BAY OF BENGAL AND ENHANCED DIVERGENCE IN UPPER LEVEL CONTRIBUTED TO SLIGHT INTENSIFICATION OF SYSTEM AT 0600 UTC. UPPER TROPOSPHERIC RIDGE RUNS ALONG 16^{0}N.

THE GUIDANCE FROM VARIOUS NUMERICAL MODELS (IMD GFS, NCEP GFS, ECMWF AND IMD MME) AND ENVIRONMENTAL FEATURES SUGGEST THAT THE CYCLONIC STORM **"MIDHILI" (PRONOUNCED AS "MIDHILI")** IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST CLOSE TO KHEPUPARA WITH WIND SPEED OF 60-70 KMPH GUSTING TO 80 KMPH DURING 1200 UTC TO 1800 UTC OF 17TH NOVEMBER, 2023.

(M. SHARMA)
SCIENTIST-D
RSMC NEW DELHI

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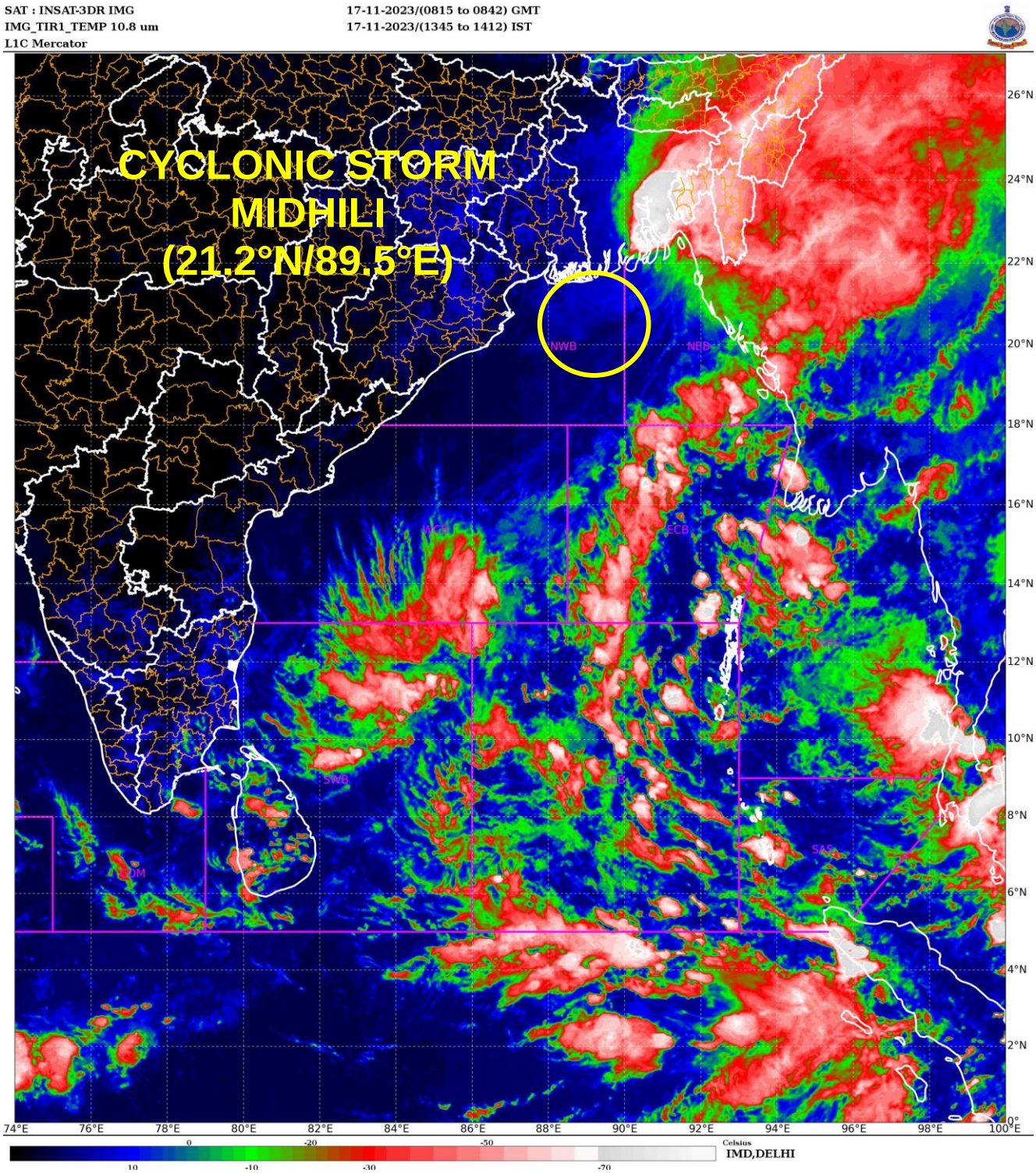

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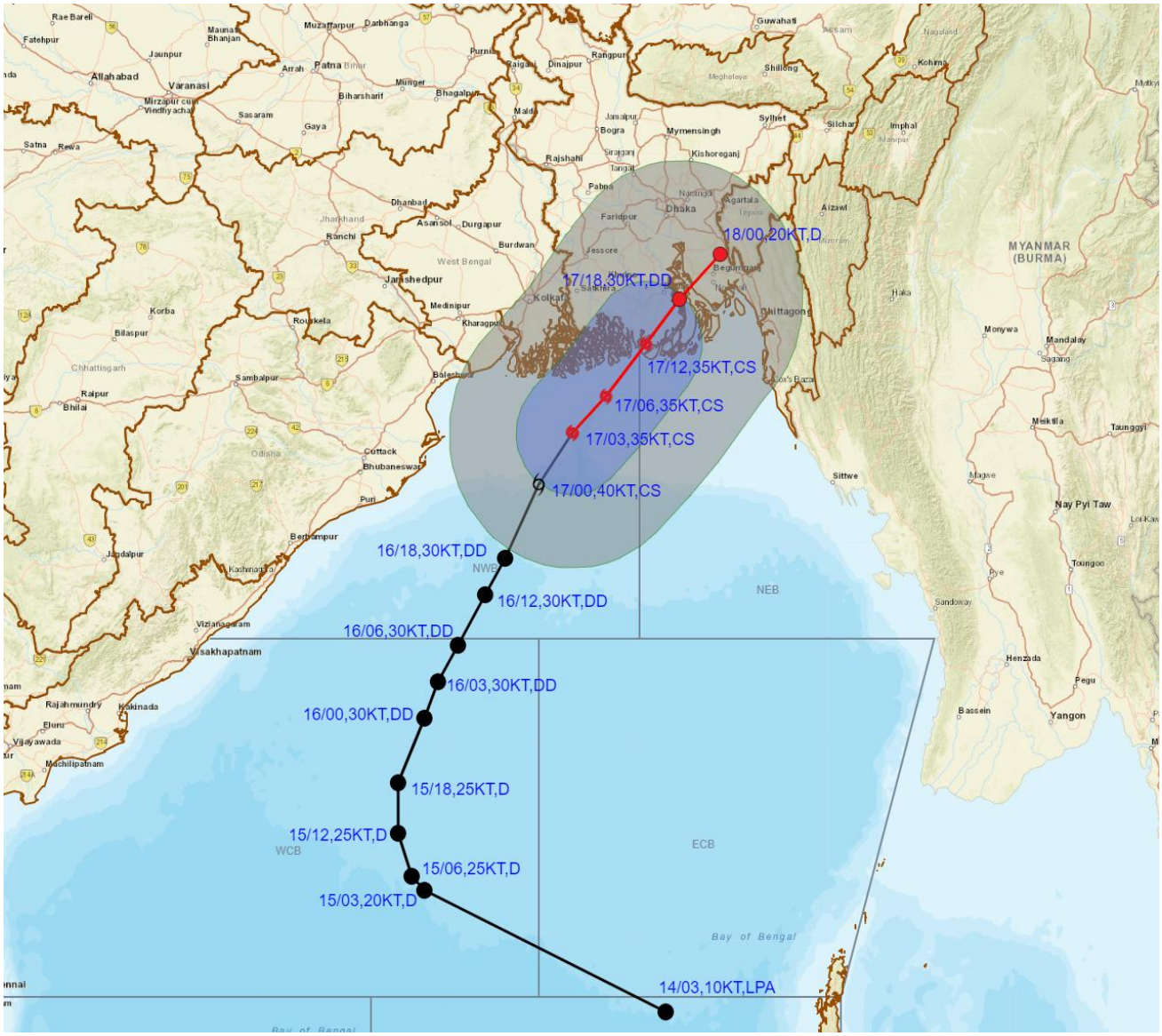
OBSERVED AND FORECAST TRACK AND INTENSITY ALONG WITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM MIDHILI NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL BASED ON 0300 UTC (0830 HRS IST) OF 17TH NOVEMBER 2023.



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
28-33 KT (52-61 KMPH)
34-49 KT (62-91 KMPH)
50-63 KT (92-117 KMPH)
≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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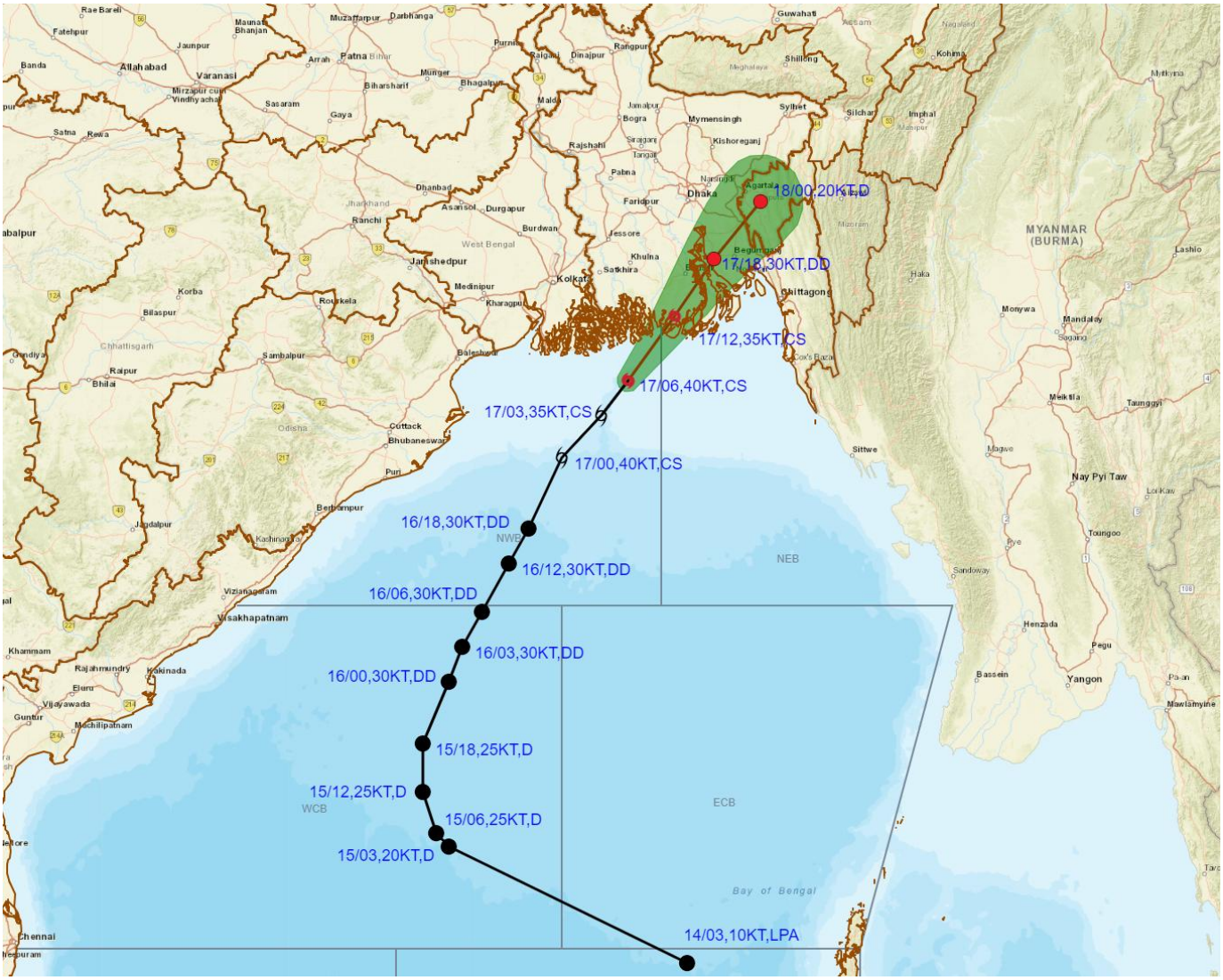

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LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS		
Date and Time (UTC)	DIGHA	KHEPUPARA	CHITTAGONG (AMBAGAN)
		Storm Surge Guidance	
17.11.23/0600	210, ESE	110, SW	270, WSW
17.11.23/1200	290, ENE	10, N	220, SW

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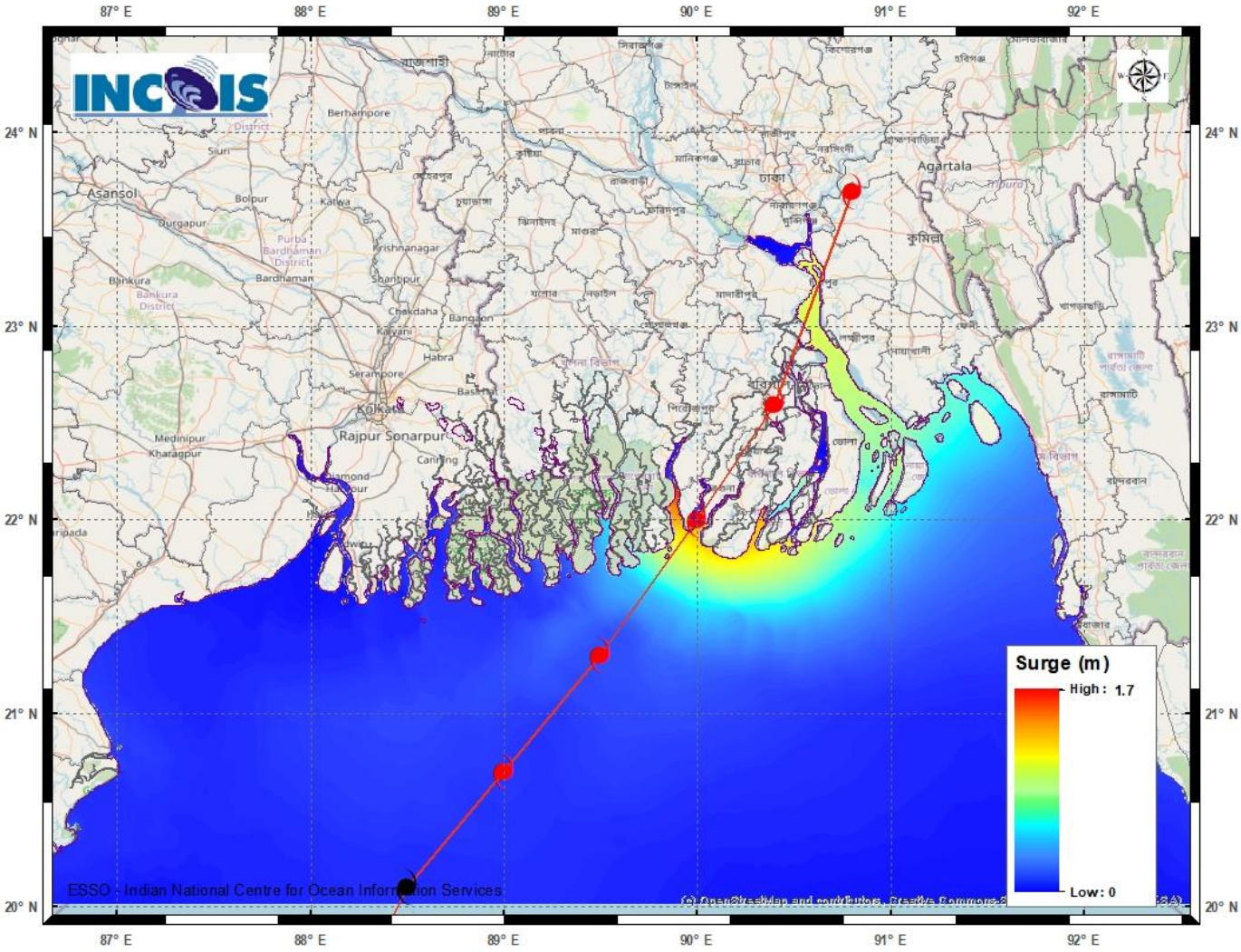

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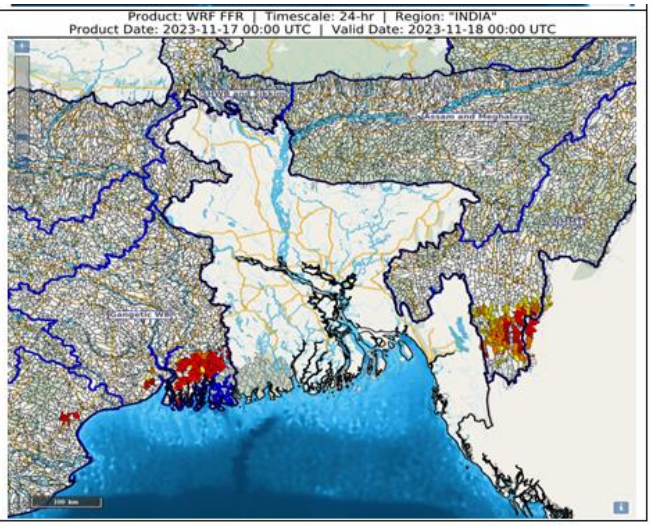
FLASH FLOOD GUIDANCE

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 18-11-2023 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of NMMT and **Gangetic West Bengal** Met Sub-divisions during next 24 hours.

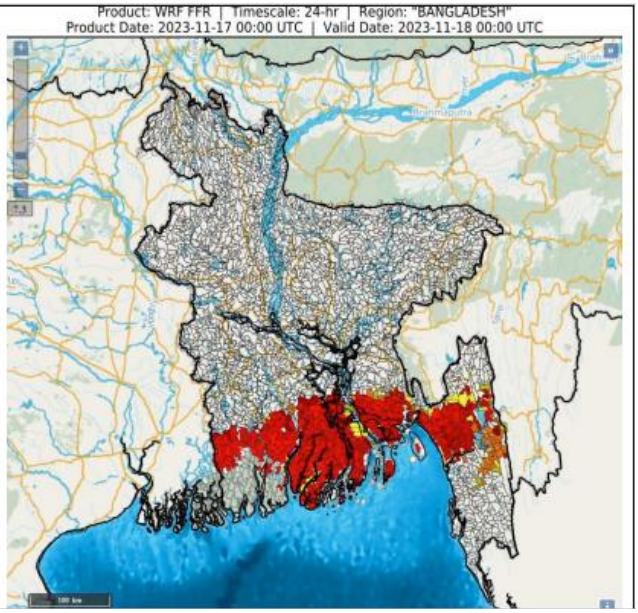
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



24 hours Flash Flood Risk Outlook till 00 UTC of 18.11.2023:

Moderate flash flood risk likely over few watersheds & neighbourhoods of Southern parts of Bangladesh for next 24 hours.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



Flash Flood Risk
High Risk (Take Action)
Moderate Risk (Be Prepared)
Low Risk (Be Updated)

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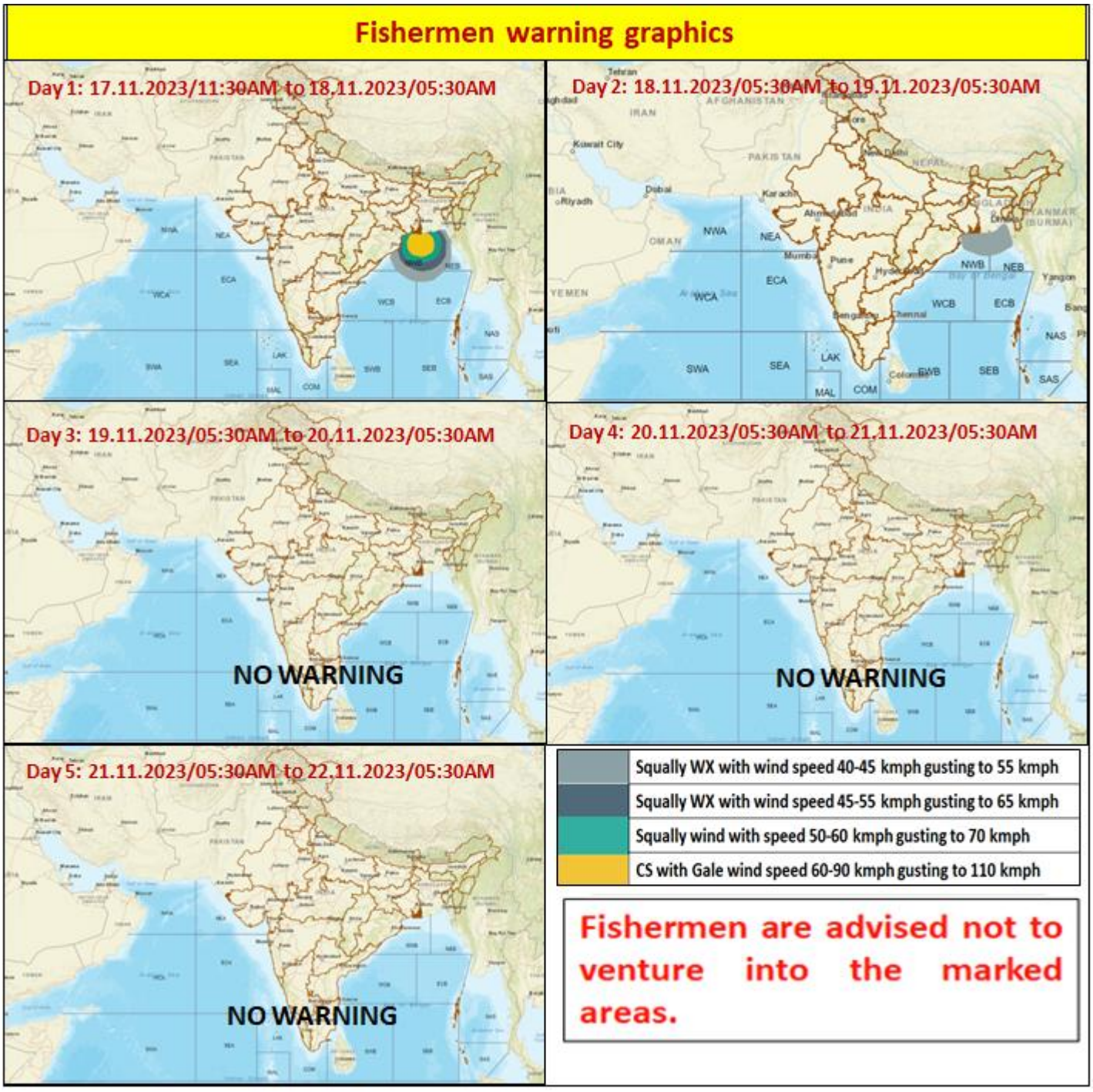
Fishermen warning graphics



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