



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 16**

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 27.05.2024

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. 16 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1300 UTC OF 27.05.2024 BASED ON 0900 UTC OF 27.05.2024

SUB: CYCLONIC STORM “REMAL” PRONOUNCED AS “RE-MAL” OVER BANGLADESH AND ADJOINING WEST BENGAL

THE CYCLONIC STORM “REMAL” (PRONOUNCED AS “RE-MAL”) OVER BANGLADESH AND ADJOINING WEST BENGAL MOVED SLOWLY NORTHWARDS, WITH A SPEED OF 05 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0900 UTC OF TODAY, THE 27TH MAY, 2024 OVER THE SAME REGION, NEAR **LATITUDE 23.1°N AND **LONGITUDE 89.2°E** ABOUT 80 KM NORTH-NORTHWEST OF MONGLA (41958, BANGLADESH), 110 KM NORTH-NORTHEAST OF CANNING (42812, WEST BENGAL), 120 KM EAST-NORTHEAST OF KOLKATA (42807, WEST BENGAL), 170 KM NORTHWEST OF KHEPUPARA (41984, BANGLADESH) AND 140 KM SOUTHWEST OF DHAKA (41923, BANGLADESH)**

THE SYSTEM IS LIKELY TO MOVE NORTH-NORTHEASTWARDS, AND GRADUALLY WEAKEN FURTHER INTO A DEEP DEPRESSION BY NIGHT OF TODAY, THE 27TH MAY 2024.

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
27.05.24/0900	23.1/89.2	60-70 gusting to 80	CYCLONIC STORM
27.05.24/1200	23.4/89.3	60-70 gusting to 80	CYCLONIC STORM
27.05.24/1800	24.2/90.0	50-60 gusting to 70	DEEP 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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28.05.24/0000	24.8/90.7	35-45 gusting to 55	DEPRESSION
28.05.24/0600	25.4/91.5	25-35 gusting to 45	WELL MARKED LOW PRESSURE AREA

AS PER INSAT-3D IMAGERY VORTEX (REMA) IS LOCATED OVER SOUTH BANGLADESH & NEIGHBOURHOOD. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTH BAY OF BENGAL, EASTERN PARTS OF GANGETIC WEST BENGAL, BANGLADESH, (CLOUD TOP TEMPERATURE IS -93 DEG CEL) AND EAST ODISHA, TRIPURA, GANGETIC WEST BENGAL, EAST JHARKHAND, EAST BIHAR, SUB HIMALAYAN WEST BENGAL, SIKKIM.

AS PER LATEST OBSERVATIONS, ESTIMATED CENTRAL PRESSURE IS 979 HPA AT 0900 UTC OF 27TH MAY. ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. JESSORE (41936) REPORTED LOWEST PRESSURE OF 979 HPA. PRESSURE OF OUTERMOST CLOSED ISOBAR IS 992 HPA.

WARNINGS:

WIND WARNING:

(A) BAY OF BENGAL

❖ **GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH IS PREVAILING OVER NORTH BAY OF BENGAL. IT IS LIKELY TO DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH BY 1500 UTC OF 27TH MAY.**

(B) ALONG & OFF BANGLADESH AND WEST BENGAL COASTS

❖ **GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH WILL CONTINUE TO PREVAIL ALONG & OFF BANGLADESH AND ADJOINING WEST BENGAL COASTS DURING NEXT 3 HOURS. IT IS LIKELY TO DECREASE BECOMING SQUALLY WIND REACHING 45-55 KMPH GUSTING TO 65 KMPH BY 1500 UTC OF 27TH MAY AND DECREASE GRADUALLY THEREAFTER.**

❖ **GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH WILL CONTINUE TO PREVAIL OVER KOLKATA & NADIA DURING NEXT 3 HOURS. THE WIND SPEED WOULD DECREASE OVER THESE REGIONS GRADUALLY THEREAFTER.**

(C) NORTHEASTERN STATES

SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS LIKELY OVER SOUTH ASSAM AND MEGHALAYA, TRIPURA AND 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY OVER & MIZORAM, MANIPUR AND REMAINING PARTS OF ASSAM ON 27TH MAY. IT WOULD REDUCE TO 40-50 GUSTING TO 60 KMPH OVER ASSAM & MEGHALAYA TILL 0600 UTC OF 28TH MAY.

SEA CONDITION WARNING:

(A) NORTH BAY OF BENGAL

HIGH SEA CONDITION IS LIKELY OVER NORTH BAY OF BENGAL TILL 1500 UTC AND GRADUALLY IMPROVE BECOMING VERY ROUGH TO ROUGH THEREAFTER TILL 1800 UTC OF 27TH MAY. IT WOULD IMPROVE THEREAFTER.

(B) ALONG & OFF BANGLADESH AND WEST BENGAL COASTS

HIGH SEA CONDITION IS LIKELY ALONG & OFF BANGLADESH AND WEST BENGAL COASTS TILL EVENING AND GRADUALLY IMPROVE BECOMING VERY ROUGH TO ROUGH THEREAFTER TILL 1800 UTC OF 27TH MAY. IT WOULD IMPROVE THEREAFTER.

FISHERMEN WARNING:

FISHERMEN ARE ADVISED NOT TO VENTURE INTO NORTH BAY OF BENGAL ALONG AND OFF WEST BENGAL AND BANGLADESH COASTS ON 27TH MAY.

REMARKS:

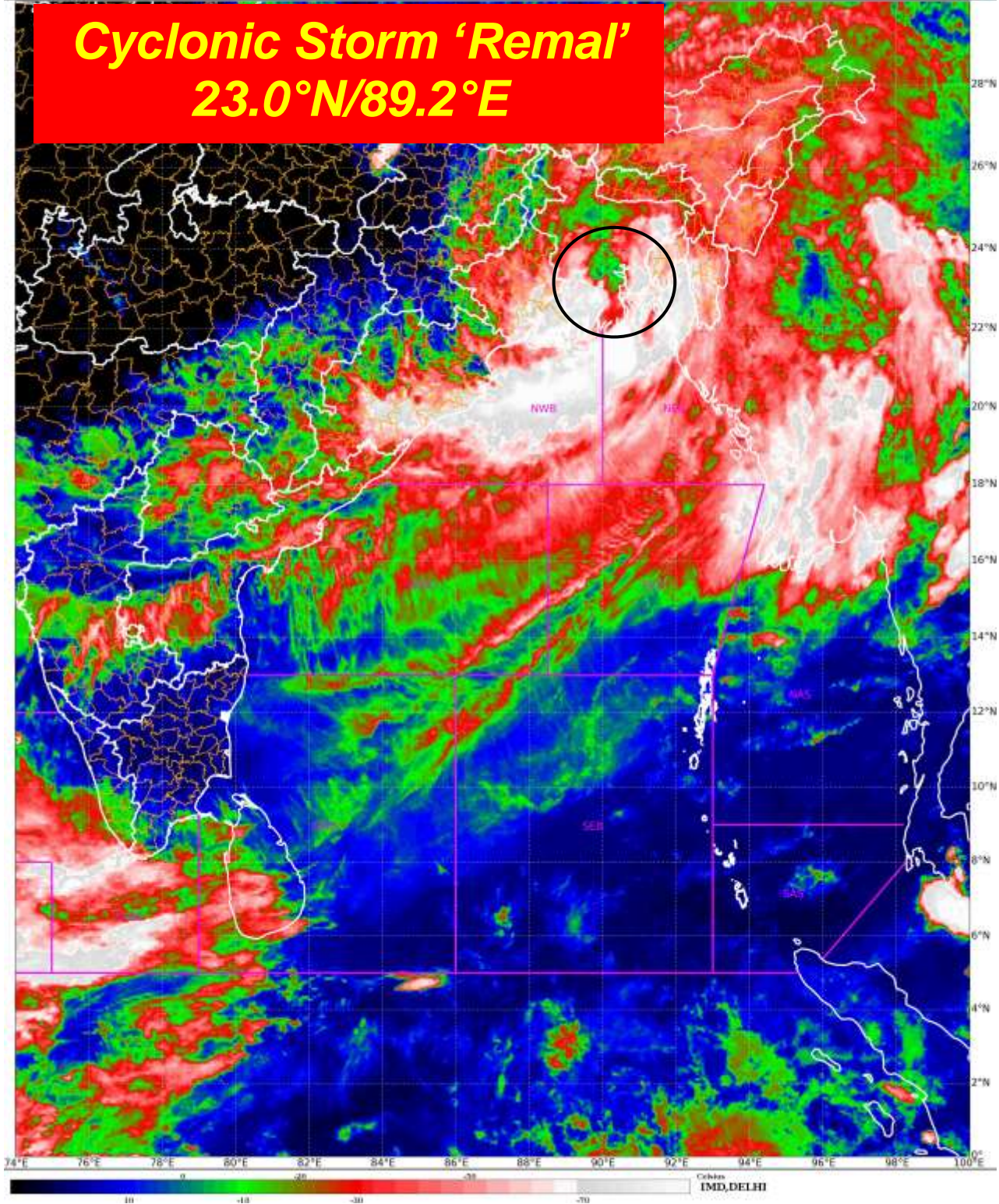
CURRENT ENVIRONMENTAL CONDITIONS INDICATE THAT SYSTEM IS STILL IN FAVORABLE ENVIRONMENT. LOW LEVEL VORTICITY IS ABOUT $250 \times 10^{-5} \text{S}^{-1}$ OVER NORTH BAY OF BENGAL & ADJOINING COASTAL BANGLADESH AND WEST BENGAL WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS ABOUT $40 \times 10^{-5} \text{S}^{-1}$ TO THE SOUTH OF THE SYSTEM CENTER. UPPER-LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{S}^{-1}$ TO THE EAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) IS LOW (05-10 KT) ALONG THE FORECAST TRACK. ALL THESE FEATURES ARE SUPPORTING IN MAINTAINING INTENSITY OF THE SYSTEM. SYSTEM HAS SLOWED DOWN SIGNIFICANTLY. IT IS LYING TO THE NORTH OF THE RIDGE. THE SYSTEM IS LIKELY TO MOVE GRADUALLY NORTH-NORTHEASTWARDS UNDER THE INFLUENCE OF SOUTH-SOUTHWESTERLY WINDS PREVAILING TO THE NORTH OF RIDGE.

IN VIEW OF ALL THE ABOVE, THE SYSTEM IS LIKELY TO **MOVE NORTH-NORTHEASTWARDS**, MAINTAIN IT'S INTENSITY DURING NEXT 6 HOURS **AND WEAKEN INTO A DEEP DEPRESSION BY 1800 UTC OF TODAY, THE 27TH MAY 2024.**

M. SHARMA
SCIENTIST D
RSMC NEW DELHI



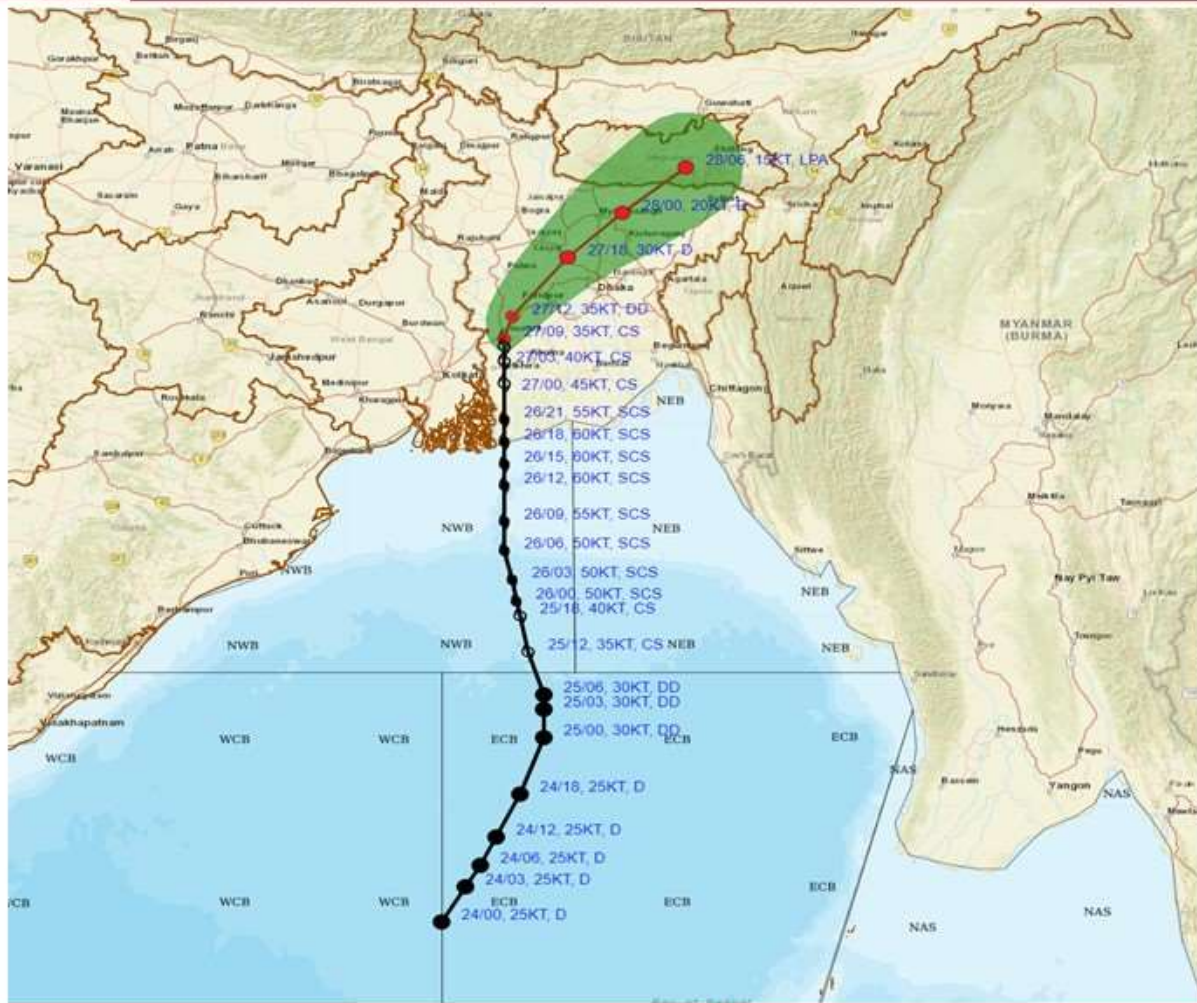
Cyclonic Storm 'Remal' 23.0°N/89.2°E



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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FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH CYCLONIC STORM 'REMAL' OVER BANGLADESH AND ADJOINING WEST BENGAL BASED ON 0900 UTC (1430 IST) OF 27TH MAY 2024.



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)

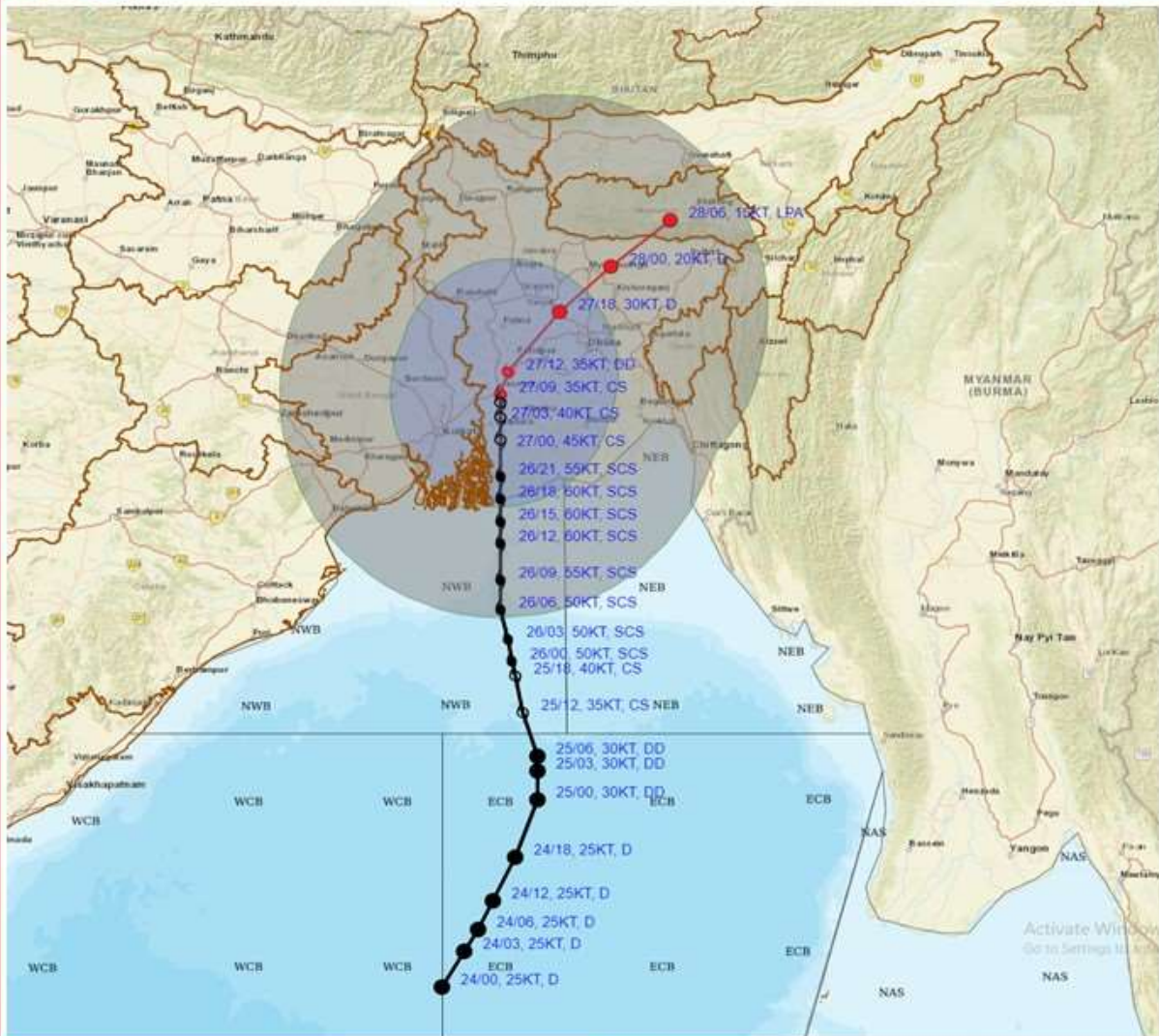
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- ▲ CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS			
Date and Time (UTC)	Canning	Khepupara	DHAKA	Mongla
27.05.24/0900	110, NNE	170, NW	140, WSW	70, NNW
27.05.24/1200	150, NNE	190, NNW	110, WSW	100, NNW
27.05.24/1800	260, NNE	250, N	70, NW	190, NNE
28.05.24/0000	360, NE	320, N	120, NNE	280, NNE
28.05.24/0600	460, NE	410, NNE	220, NNE	380, NNE

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FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM 'REMAL' OVER BANGLADESH AND ADJOINING WEST BENGAL BASED ON 0900 UTC (1430 IST) OF 27TH MAY 2024.



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)

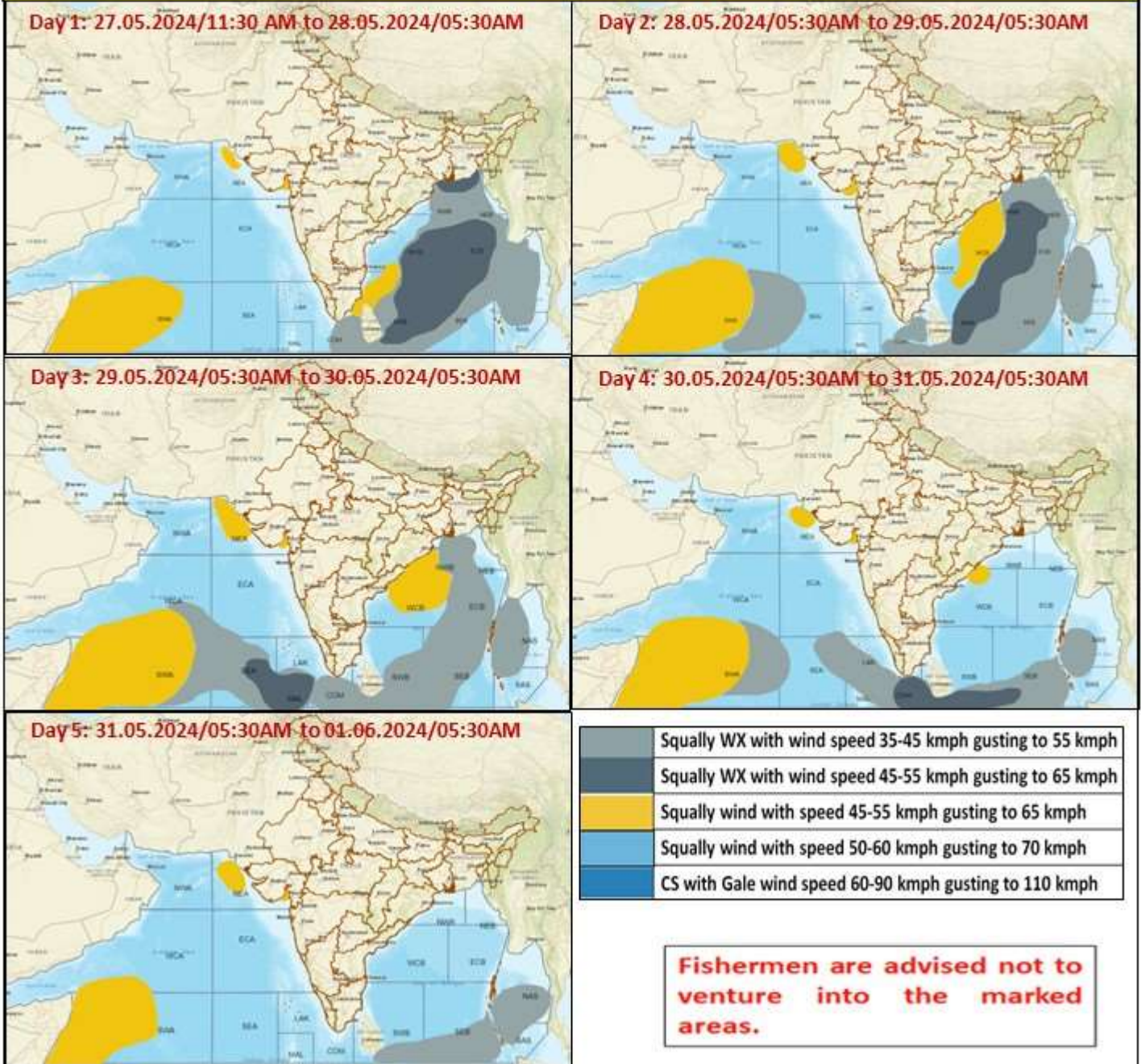
● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ● CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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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Fishermen Warning Graphics



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FLASH FLOOD GUIDANCE FOR BANGLADESH

Persistent Flood Threat (PFFT) **Till 1200 UTC of 27.05.2024:**

Low to Moderate flash flood threat likely over Bangladesh for next 06 hours.

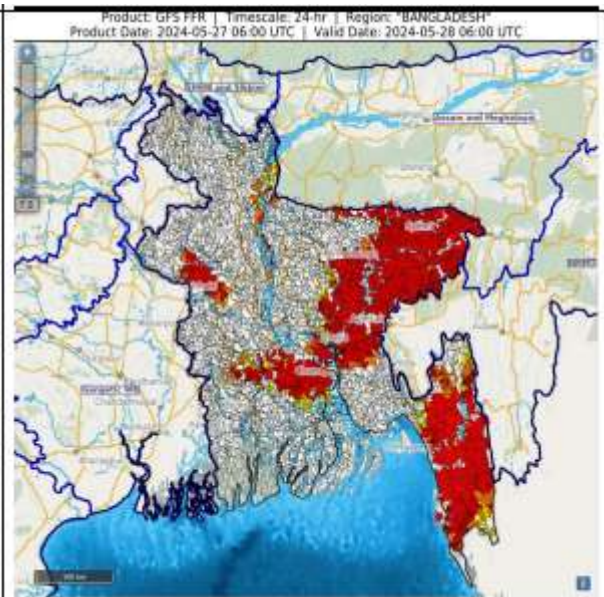
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 6 hours.



24 hours Flash Flood Risk Outlook till 0600 UTC of 28.05.2024:

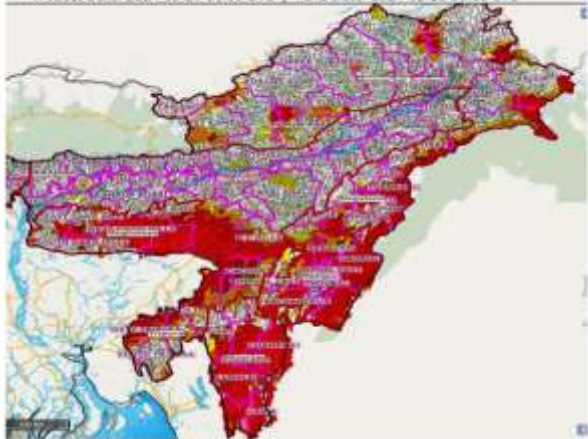
Moderate flash flood risk likely over Bangladesh for next 24 hours.

Surface runoff/ Inundation may occur on low lying areas due to persistent rainfall under the influence of impending Cyclonic Storm “Remal” in next 24 hours.



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

Flash Flood Guidance for Northeastern States

<p><u>24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 28-05-2024 :</u></p> <p>Moderate flash flood risk likely over few watersheds & neighbourhoods of Arunachal Pradesh, Assam & Meghalaya and NMMT Met Sub-divisions during next 24 hours.</p> <p>Surface runoff/ Inundation may occur on low lying areas due to persistent rainfall under the influence of impending Cyclonic Storm "Remal" in next 24 hours.</p>	<div style="font-size: 8px; text-align: center; margin-bottom: 5px;"> Product: DFS FFR Timescale: 24-hr Region: "INDIA" Product Date: 2024-05-27 06:00 UTC Valid Date: 2024-05-28 06:00 UTC </div> 
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Flash Flood Threat	Flash Flood Risk
 High Threat (Take Action)	 High Risk (Take Action)
 Moderate threat (Be Prepared)	 Moderate Risk (Be Prepared)
 Low Threat (Be Updated)	 Low Risk (Be Updated)

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