



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 07**

DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 26.05.2024

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. 7 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 26.05.2024 BASED ON 0600 UTC OF 26.05.2024

SUB: SEVERE CYCLONIC STORM “REMAL” PRONOUNCED AS “RE-MAL” OVER NORTH BAY OF BENGAL

THE SEVERE CYCLONIC STORM “REMAL” (PRONOUNCED AS “RE-MAL”) OVER THE NORTH BAY OF BENGAL MOVED NEARLY NORTHWARDS, WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 26TH MAY, 2024 OVER THE SAME REGION NEAR LATITUDE 20.2°N AND LONGITUDE 89.2°E ABOUT 220 KM SOUTH-SOUTHWEST OF KHEPUPARA (41984, BANGLADESH), 260 KM SOUTH OF MONGLA (41958, BANGLADESH), 210 KM SOUTHEAST OF SAGAR ISLANDS (42731, WEST BENGAL) AND 230 KM SOUTH-SOUTHEAST OF CANNING (42812, WEST BENGAL). CURRENTLY, MAXIMUM SUSTAINED WIND SPEED OF 95-105 KMPH GUSTING TO 115 KMPH PREVAILS AROUND THE CYCLONE CENTRE.

IT IS VERY LIKELY TO CONTINUE TO MOVE NEARLY NORTHWARDS, INTENSIFY FURTHER AND **CROSS BANGLADESH AND ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND AND KHEPUPARA, CLOSE TO SOUTHWEST OF MONGLA (BANGLADESH) BY 1800 UTC OF TODAY, THE 26TH MAY 2024 AS A SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 110-120 KMPH GUSTING TO 135 KMPH.**

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 |
|--------------------|---------------------------------|--|-------------------------------------|
| 26.05.24/0600 | 20.2/89.2 | 95-105 gusting to 115 | Severe Cyclonic Storm |
| 26.05.24/1200 | 21.0/89.1 | 110-120 gusting to 135 | Severe Cyclonic Storm |
| 26.05.24/1800 | 21.8/89.2 | 110-120 gusting to 135 | Severe Cyclonic Storm |
| 27.05.24/0000 | 22.7/89.5 | 70-80 gusting to 90 | Cyclonic Storm |
| 27.05.24/0600 | 23.5/89.8 | 50-60 gusting to 70 | Deep Depression |
| 27.05.24/1800 | 24.8/90.5 | 30-40 gusting to 50 | Depression |

AS PER INSAT-3D IMAGERY, CLOUDS ARE ORGANISED IN CURVED BAND PATTERN. INTENSITY OF THE SYSTEM IS T3.0. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH AND ADJOINING CENTRAL & NORTH ANDAMAN SEA (MINIMUM CLOUD TOP TEMPERATURE IS -93 DEG CESIUS). AS PER MULTISATELLITE WINDS, STRONGER WINDS ARE SEEN IN EASTERN SECTOR AND NORTHWEST SECTOR. THE TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM.

AS PER LATEST OBSERVATIONS, ESTIMATED CENTRAL PRESSURE IS 982 HPA AT 0600 UTC. ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. SEA CONDITION IS HIGH TO VERY HIGH OVER NORTH BAY OF BENGAL AND VERY ROUGH CENTRAL BAY OF BENGAL.

SHIP/BOUY OBSERVATION AT 0300 UTC IS GIVEN BELOW:

| BOUY & SHIP (LAT°N/LONG°E) | WIND DIRECTION°/ SPEED (KNOTS) | MSLP(hPa) |
|---|---|------------------|
| SHIP 20.2/86.3 | 60/11 KT | 997 |

WIND WARNING:

(A) BAY OF BENGAL:

- ❖ **GALE WIND SPEED REACHING 80-90 KMPH GUSTING TO 100 KMPH** IS LIKELY TO PREVAIL OVER CENTRAL BAY OF BENGAL TILL 0600 UTC AND DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH TILL 0000 UTC OF 27 TH MAY.
- ❖ **GALE WIND SPEED REACHING 90-100 KMPH GUSTING TO 110 KMPH** PREVAILING OVER NORTH BAY OF BENGAL IS LIKELY TO INCREASE BECOMING 100-120 KMPH GUSTING TO 135 KMPH FROM 06 UTC TILL 1800 UTC OF 26 TH MAY. IT IS LIKELY DECREASE THEREAFTER BECOMING 70-80 KMPH GUSTING TO 90 KMPH BY 0000 UTC ON 27 TH MAY AND SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH BY 1200 UTC OF 27 TH MAY.

(B) ALONG & OFF BANGLADESH AND WEST BENGAL COASTS:

- ❖ **SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH** IS PREVAILING ALONG OFF BANGLADESH AND WEST BENGAL & ADJOINING NORTH ODISHA COASTS. IT IS LIKELY TO INCREASE BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH FROM 0900 UTC OF 26 TH MAY AND 100-120 KMPH GUSTING TO 135 KMPH ALONG & OFF BANGLADESH AND ADJOINING WEST BENGAL COASTS FROM 1200 UTC OF 26 TH MAY TILL 0000 UTC OF 27 TH MAY. IT IS LIKELY DECREASE THEREAFTER TO BECOME 60-70 KMPH GUSTING TO 80 KMPH BY 0900 UTC AND SQUALLY WIND 50-60 KMPH GUSTING TO 70 KMPH BY 1200 UTC OF 27 TH MAY.
- ❖ **SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH** IS LIKELY TO COMMENCE OVER HOWRAH, HOOGLY, KOLKATA AND EAST MEDINIPUR DISTRICTS FROM 1200 UTC OF 26 TH MAY. IT WILL INCREASE GRADUALLY BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH OVER THESE DISTRICTS AROUND 1500 UTC OF 26 TH MAY

EXCEPT EAST MEDINIPUR WHERE THE WIND SPEED MAY REACH UP TO 60-70 KMPH GUSTING TO 80 KMPH DURING THE SAME PERIOD.

(C) ALONG & OFF NORTH ODISHA COASTS:

❖ SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS LIKELY TO PREVAIL TILL 27 TH MAY 0000 UTC.

(D) NORTHEASTERN STATES:

❖ **SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH** IS LIKELY OVER MIZORAM TRIPURA SOUTH MANIPUR ON 26 TH 27 TH MAY AND 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY OVER SOUTH ASSAM AND MEGHALAYA ON 27 TH MAY.

STORM SURGE WARNING:

STORM SURGE OF ABOUT 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF COASTAL WEST BENGAL AND 3-4 M HEIGHT ABOVE ASTRONOMICAL TIDE LIKELY TO INUNDATE LOW LYING AREAS OF COASTAL BANGLADESH AROUND THE TIME OF LANDFALL. THERE IS A PROBABILITY OF 80% FOR THE STORM SURGE HEIGHT EXCEEDING 3 M ALONG & OFF BANGLADESH COAST BETWEEN 90° E & 90.80°E. THERE COULD BE COASTAL INUNDATION ALONG THE RIVERS AND CREEKS INCLUDING MEGHNA RIVER.

SEA CONDITION WARNING:

(A) CENTRAL AND NORTH BAY OF BENGAL:

VERY ROUGH TO HIGH SEA CONDITION IS LIKELY TO PREVAIL OVER CENTRAL BAY OF BENGAL ON 26 TH MAY AND HIGH TO VERY HIGH OVER NORTH BAY OF BENGAL TILL 27 TH MAY 0000 UTC.

(B) ALONG OFF BANGLADESH AND WEST BENGAL COASTS

VERY ROUGH SEA CONDITION IS PREVAILING ALONG OFF BANGLADESH AND WEST BENGAL COASTS. IT WOULD BECOME HIGH TO VERY HIGH ALONG OFF BANGLADESH AND WEST BENGAL COASTS FROM 26 TH 0600 UTC ONWARDS TILL 27 TH MAY 0000 UTC.

(C) ALONG OFF NORTH ODISHA COAST:

VERY ROUGH SEA CONDITION IS LIKELY ALONG OFF NORTH ODISHA COAST TILL 27 TH MAY 0000 UTC.

FISHERMEN WARNING (GRAPHICS ATTACHED):

FISHERMEN ARE ADVISED NOT TO VENTURE INTO CENTRAL BAY OF BENGAL TILL 26TH MAY AND NORTH BAY OF BENGAL TILL 27TH MAY. FISHERMEN OUT AT SEA ARE ADVISED TO RETURN TO THE COAST.

REMARKS:

THE MADDEN JULIAN INDEX (MJO) IS CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT'S PHASE & AMPLITUDE ARE HIGHLY CONDUCIVE FOR FURTHER INTENSIFICATION OVER THE BAY OF BENGAL (BOB) DURING NEXT 12 HOURS.

STRONG EASTERLY WINDS (5-7 MPS) OVER NORTH BOB, WESTERLY WINDS (5-7 MPS) OVER THE SOUTH & CENTRAL BOB ALONGWITH COUPLED KELVIN WAVES, EQUATORIAL ROSSBY WAVES AND MJO WILL SUPPORT FURTHER INTENSIFICATION OF SYSTEM DURING NEXT 12 HOURS.

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM² OVER MAJOR PARTS OF BAY OF BENGAL. IT IS INDICATING SLIGHTLY DECREASING TENDENCY TOWARDS NORTH BOB AND ALONG THE COASTS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30-32°C OVER ENTIRE BOB, BEING MORE THAN 32°C OVER SOME PARTS OF NORTH BOB. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCIVE FOR FURTHER INTENSIFICATION OF SYSTEM.

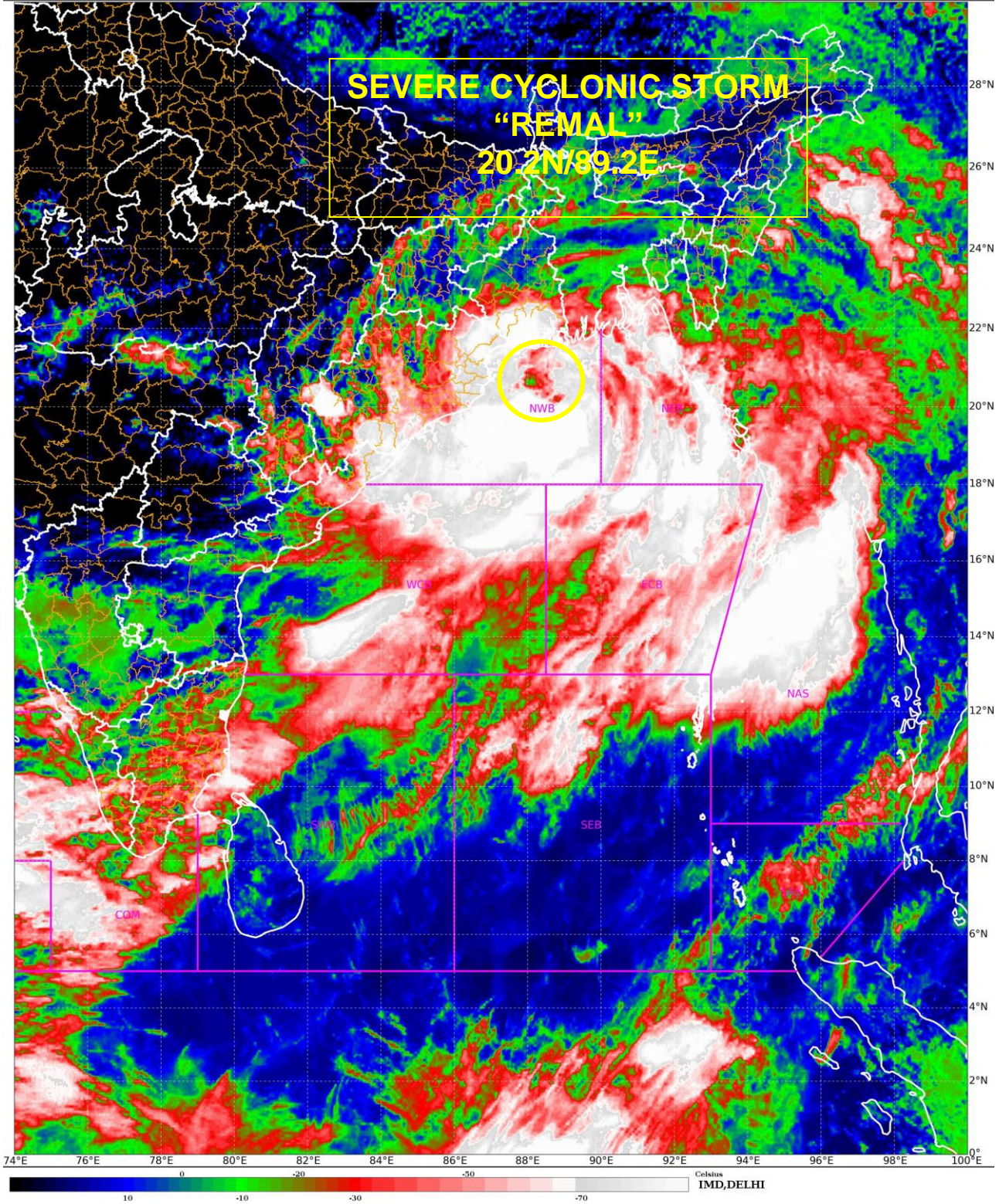
CONSIDERING THE ENVIRONMENTAL CONDITIONS, LOW LEVEL VORTICITY IS ABOUT 250x10⁻⁵S⁻¹ OVER NORTH BAY OF BENGAL WITH VERTICAL EXTENSION UPTO 200 HPA

LEVEL. LOW LEVEL CONVERGENCE IS ABOUT $30 \times 10^{-5} \text{ S}^{-1}$ TO THE WEST OF THE SYSTEM CENTER. STRONG EQUATORWARD OUTFLOW IS SEEN. UPPER LEVEL DIVERGENCE IS ABOUT $30 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR (VWS) IS ANTICYCLONIC AND LOW (05-10 KT) ALONG THE FORECAST TRACK. MID LEVEL WIND SHEAR IS ANTICYCLONIC OVER THE SYSTEM AREA WHICH WILL SUPPORT FURTHER INTENSIFICATION OF THE SYSTEM. SYSTEM IS MOVING SLOWLY NORTHWARDS, AS IT ITS CENTRE LIES CLOSE TO RIDGE. IT WOULD CONTINUE SO FOR NEXT 12 HOURS. THEREAFTER, SYSTEM WOULD LIE TO THE NORTH OF RIDGE LEADING TO NORTH-NORTHEASTWARDS MOVEMENT.

THE GUIDANCE FROM VARIOUS NUMERICAL MODELS IS INDICATING CROSSING OVER BANGLADESH AND ADJOINING WEST BENGAL COAST. THE LANDFALL TIME IS VARYING BETWEEN 1500-2100 UTC OF 26TH MAY. MOST OF THE MODELS ARE INDICATING THE SYSTEM TO CROSS AS A SEVERE CYCLONIC STORM (50-60 KT).

THE SEVERE CYCLONIC STORM "REMA" IS VERY LIKELY **TO MOVE NEARLY NORTHWARDS, INTENSIFY FURTHER AND CROSS BANGLADESH AND ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND AND KHEPUPARA, CLOSE TO SOUTHWEST OF MONGLA (BANGLADESH) BY 1800 UTC OF TODAY, THE 26TH MAY 2024 AS A SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 110-120 KMPH GUSTING TO 135 KMPH.**

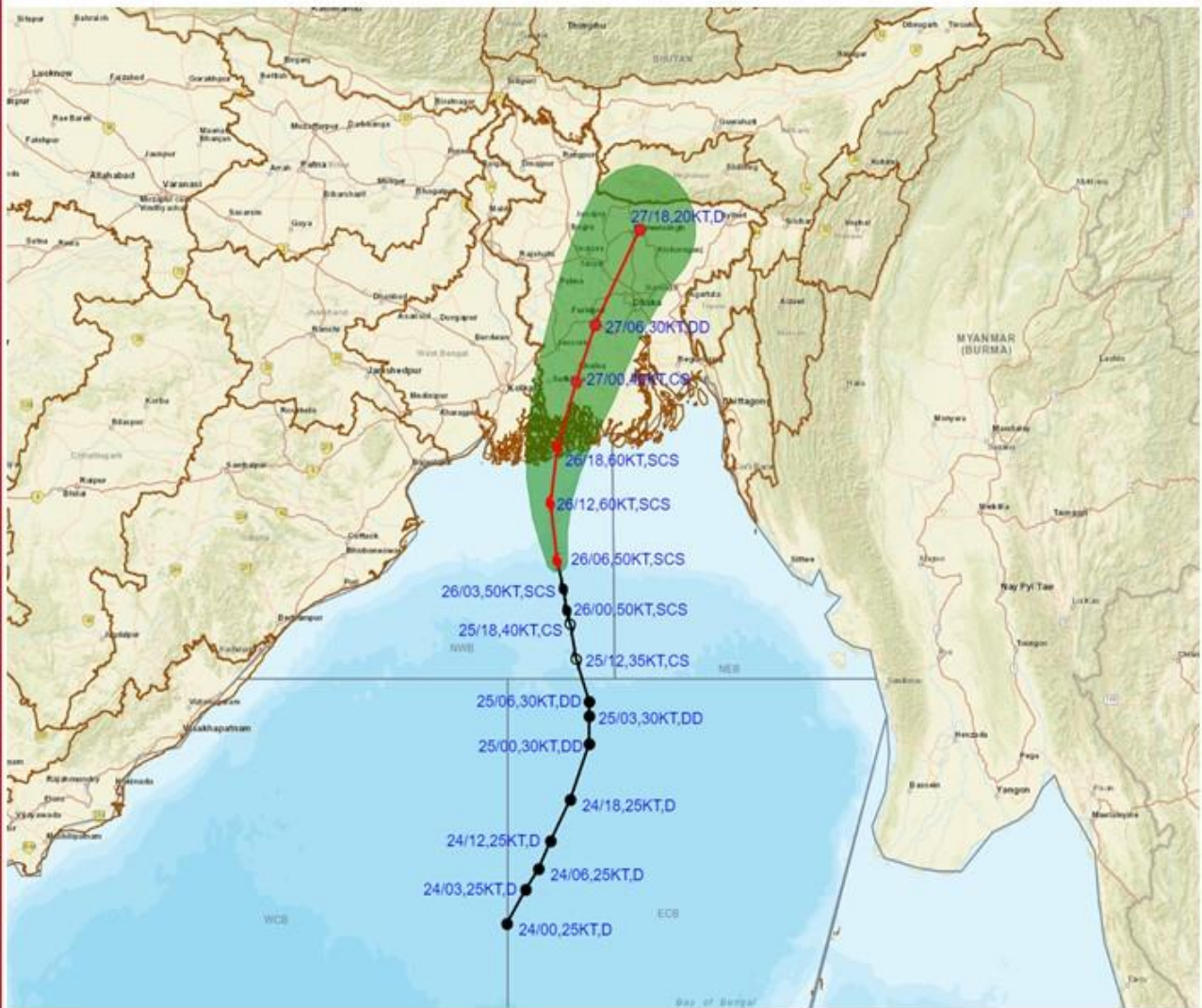
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RSMC NEW DELHI



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 SEVERE CYCLONIC STORM 'REMAL' OVER NORTH BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 26TH 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 (\geq 120 KT)

● LESS THAN 34 KT

○ 34-47 KT

○ \geq 48 KT

— OBSERVED TRACK

— FORECAST TRACK

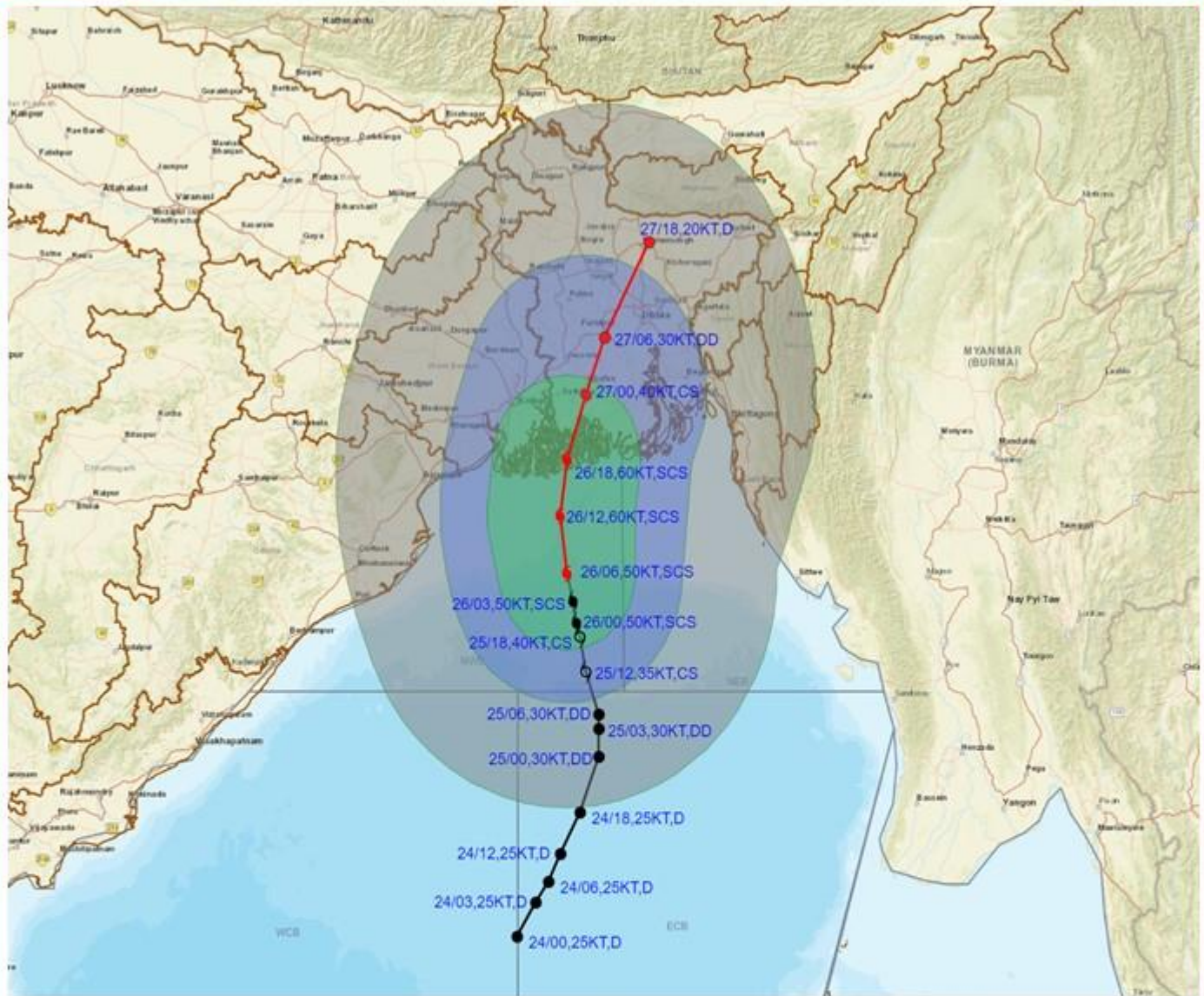
▲ CONE OF UNCERTAINTY

| Forecast Date and Time (UTC) | DISTANCE (KM) AND DIRECTION FROM STATIONS | | | |
|------------------------------------|---|-----------------|-----------|----------|
| | Canning | Sagar Island | Khepupara | Mongla |
| 26.05.24/0600 | 230, SSE | 220, SSE | 210, SSW | 260, S |
| 26.05.24/1200 | 150, SSE | 140, ESE | 150, SW | 180, SSW |
| 26.05.24/1800 | 80, SE | 110, E | 100, WSW | 90, SSW |

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
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FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH SEVERE CYCLONIC STORM 'REMAL' OVER NORTH BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 26TH MAY 2024.



DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

D: DEPRESSION (17-27 KT)

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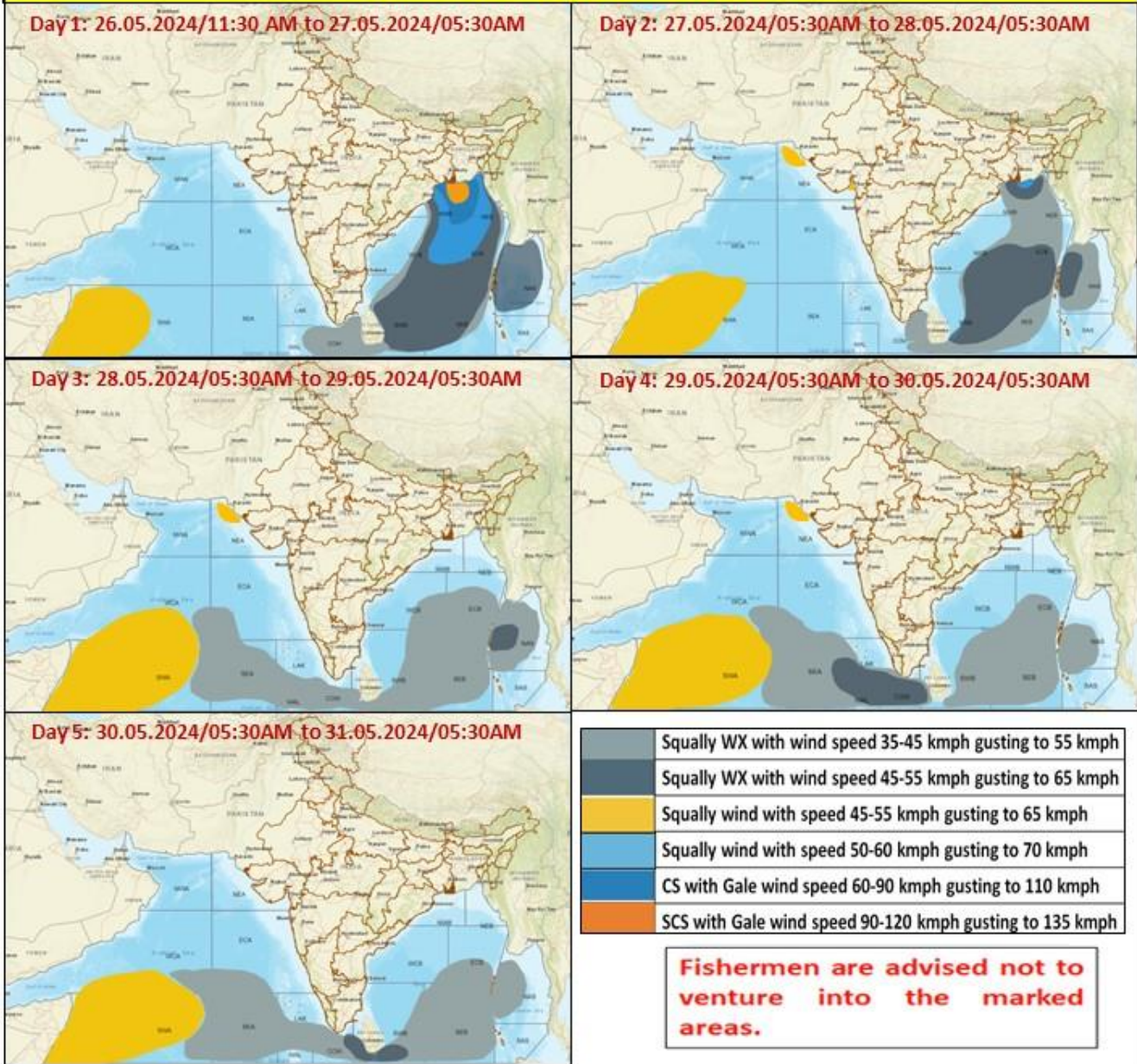
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- ▲ CONE OF UNCERTAINTY
- AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- \geq 64 KT (\geq 118 KMPH)

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 |
| \geq 64 (\geq 118) | Phenomenal | Total suspension of fishing operations |

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Fishermen Warning Graphics



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(A) Storm Surge Warning Graphics

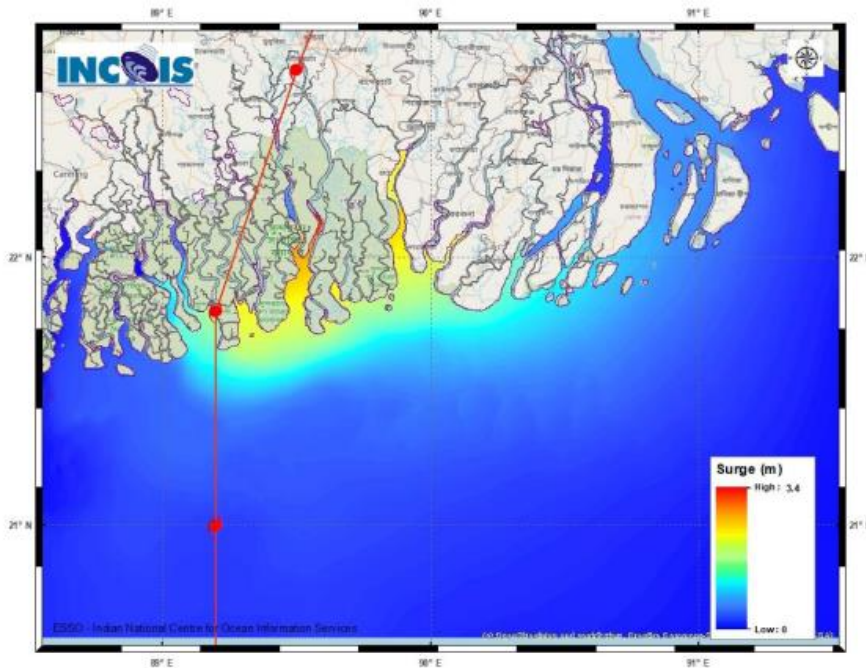
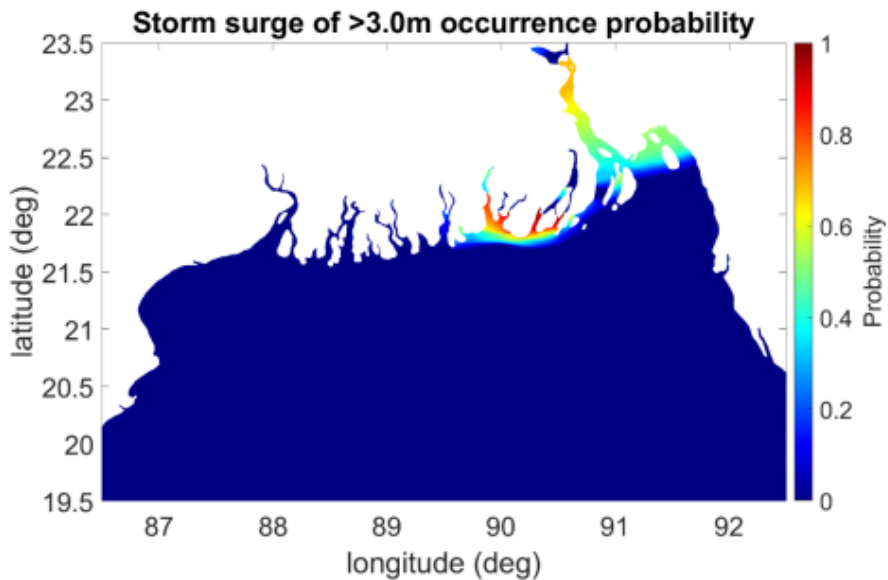


Figure: Storm Surge Map

(B) PROBABILITY OF EXCEEDANCE OF STORM SURGE >3.0M

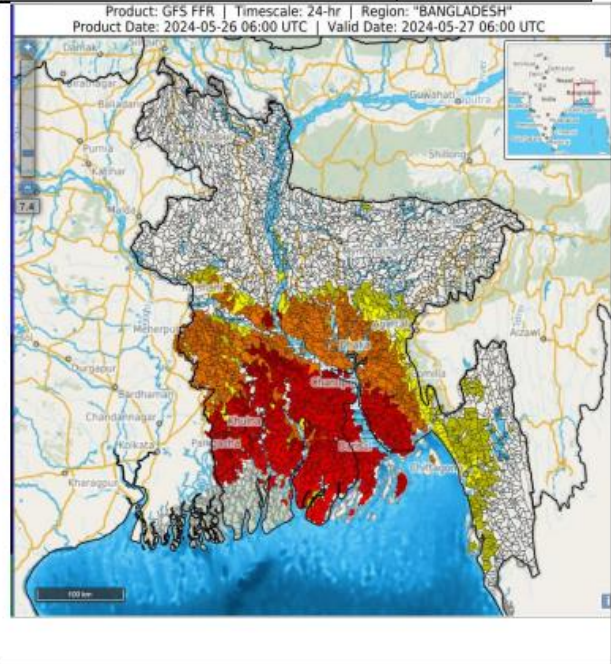


24 hours Flash Flood Risk Outlook till 0600 UTC of 27.05.2024 FOR BANGLADESH:

24 hours Flash Flood Risk Outlook till 0600 UTC of 27.05.2024:

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of coastal region and adjoining southern parts of Bangladesh (as indicated in adjacent map) 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 SCS Remal occurrence in next 24 hours.

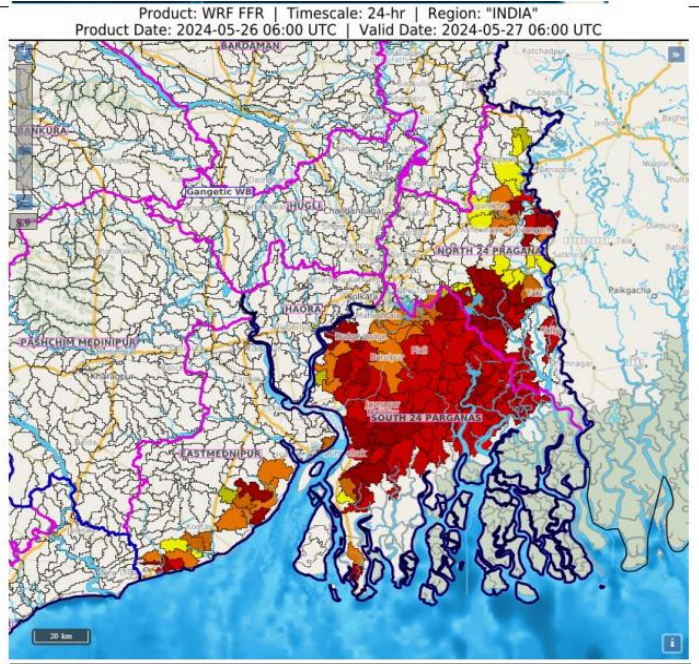








24 hours Flash Flood Risk Outlook till 1130 UTC of 27.05.2024 FOR WEST BENGAL

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 27-05-2024 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of extreme southern parts of 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 SCS Remal occurrence 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) |

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