



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK**

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 25.05.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0900 UTC OF 25.05.2024 BASED ON 0600 UTC OF 25.05.2024.

BAY OF BENGAL:

THE DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL MOVED NEARLY NORTHWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF 25TH MAY, 2024 OVER THE SAME REGION NEAR LATITUDE 18.2°N AND LONGITUDE 89.7°E, ABOUT 420 KM SOUTH OF KHEPUPARA (41984, BANGLADESH), ABOUT 420 KM SOUTH-SOUTHEAST OF SAGAR ISLANDS (42731, WEST BENGAL) AND 460 KM SOUTH-SOUTHEAST OF CANNING (42812, WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NEARLY NORTHWARDS AND INTENSIFY INTO A **CYCLONIC STORM** OVER EASTCENTRAL & ADJOINING NORTH BAY OF BENGAL AROUND 25TH MAY EVENING. CONTINUING TO MOVE FURTHER NORTHWARDS, IT WOULD INTENSIFY INTO A **SEVERE CYCLONIC STORM** BY 26TH MAY MORNING AND **CROSS BANGLADESH AND ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND (42731, WEST BENGAL) AND KHEPUPARA (41984, BANGLADESH) BY 26TH MAY MIDNIGHT AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 110-120 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
25.05.24/0600	18.2/89.7	55-65 gusting to 75	DEEP DEPRESSION
25.05.24/1200	18.8/89.6	60-70 gusting to 80	CYCLONIC STORM
25.05.24/1800	19.4/89.6	75-85 gusting to 95	CYCLONIC STORM
26.05.24/0000	20.0/89.5	95-105 gusting to 115	SEVERE CYCLONIC STORM
26.05.24/0600	20.7/89.4	110-120 gusting to 135	SEVERE CYCLONIC STORM
26.05.24/1800	21.9/89.4	110-120 gusting to 135	SEVERE CYCLONIC STORM
27.05.24/0600	23.1/89.5	60-70 gusting to 80	CYCLONIC STORM
27.05.24/1800	24.2/89.9	40-50 gusting to 60	DEPRESSION
28.05.24/0600	25.3/90.3	20-30 gusting to 40	WELL MARKED LOW PRESSURE AREA

AS PER INSAT-3D IMAGERY, THE CONVECTION HAS FURTHER ORGANISED. INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL & SOUTH BAY OF BENGAL AND ANDAMAN SEA GULF OF MARTABAN & TENASSERIM COAST (MINIMUM CLOUD TOP TEMPERATURE -93°C). SCATTERED LOW AND MEDIUM CLOUDS WITH

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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EMBEDDED INTENSE MODERATE TO INTENSE CONVECTION OVER NORTH BAY OF BENGAL. AS PER MULTISATELLITE WINDS, STRONGER WINDS ARE SEEN IN SOUTHERN EASTERN SECTOR. THE TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. MULTISATELLITE WINDS INDICATE STRONGER WINDS IN EASTERN SECTOR.

AS PER LATEST OBSERVATIONS, ESTIMATED CENTRAL PRESSURE IS 993 HPA AT 0600 UTC.

WIND WARNING:

(A) BAY OF BENGAL:

- ❖ **SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH IS PREVAILING OVER CENTRAL BAY OF BENGAL. IT IS LIKELY TO BECOME GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH FROM 1200 UTC OF TODAY, THE 25TH MAY.**
- ❖ **IT WOULD INCREASE FURTHER AND EXTEND TO ADJOINING AREAS OF NORTH BAY OF BENGAL BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH FROM 1200 UTC OF TODAY, THE 25TH MAY AND 100-110 KMPH GUSTING TO 120 KMPH OVER NORTH BAY OF BENGAL FROM 0000 UTC AND 110-120 KMPH GUSTING TO 135 KMPH FROM 1200 UTC OF 26TH MAY. GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH IS LIKELY OVER ADJOINING CENTRAL BAY OF BENGAL FROM 26TH MORNING FOR SUBSEQUENT 24 HOURS AND DECREASE THEREAFTER.**

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

- ❖ **SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY ALONG & OFF BANGLADESH AND WEST BENGAL & ADJOINING NORTH ODISHA COASTS FROM 1200 UTC OF 25TH MAY. IT IS LIKELY TO INCREASE BECOMING GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH FROM 0000 UTC OF 26TH MAY AND 100-120 KMPH GUSTING TO 135 KMPH ALONG & OFF BANGLADESH AND ADJOINING WEST BENGAL COASTS FROM 1200 UTC OF 26TH MAY FOR SUBSEQUENT 6 HOURS.**
- ❖ **SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY TO COMMENCE OVER HOWRAH, HOOGLY, KOLKATA AND EAST MEDINIPUR DISTRICTS FROM 1200 UTC OF 26TH MAY. IT WILL INCREASE GRADUALLY DURING NEXT 6 HOURS BECOMING GALE WIND SPEED REACHING 70-80 KMPH GUSTING TO 90 KMPH OVER THESE DISTRICTS 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 ODISHA COASTS:

SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY FROM 1200 UTC OF 25TH MAY TO 0000 UTC OF 27TH MAY.

(D) SOUTH BAY OF BENGAL, ANDAMAN ISLANDS AND ANDAMAN SEA:

SQUALLY WIND SPEED REACHING 40-50 KMPH GUSTING TO 60 KMPH IS LIKELY OVER ANDAMAN ISLANDS AND NORTH ANDAMAN SEA DURING NEXT 12 HOURS.

(E) NORTHEASTERN STATES:

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

SEA CONDITION:**(A) CENTRAL AND NORTH BAY OF BENGAL:**

ROUGH TO VERY ROUGH SEA CONDITION IS PREVAILING OVER CENTRAL BAY OF BENGAL. IT WOULD BECOME HIGH OVER CENTRAL BAY OF BENGAL ON 25TH MAY & 26TH MAY AND HIGH TO VERY HIGH OVER NORTH BAY OF BENGAL FROM 1200 UTC OF 25TH EVENING TILL 0000 UTC OF 27TH MAY.

(B) ALONG & OFF BANGLADESH AND WEST BENGAL COASTS

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY ALONG & OFF BANGLADESH AND WEST BENGAL COASTS FROM 1200 UTC OF 25TH MAY. IT WOULD BECOME HIGH TO VERY HIGH ALONG & OFF BANGLADESH AND WEST BENGAL COASTS FROM 0000 UTC OF 26TH ONWARDS TILL 0000 UTC OF 27TH MAY.

(C) ALONG & OFF NORTH ODISHA COAST:

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY OVER ALONG & OFF NORTH ODISHA COAST FROM 1200 UTC OF 25TH MAY TO 0000 UTC OF 27TH MAY.

(D) ALONG & OFF ANDAMAN ISLANDS:

ROUGH TO VERY ROUGH SEA CONDITION IS LIKELY OVER ANDAMAN ISLANDS AND NORTH ANDAMAN SEA DURING NEXT 12 HOURS.

STORM SURGE:

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.

FISHERMEN WARNING (GRAPHICS ATTACHED):

FISHERMEN ARE ADVISED NOT TO VENTURE INTO SOUTH BAY OF BENGAL AND ANDAMAN SEA TILL 27TH MAY, CENTRAL BAY OF BENGAL TILL 26TH MAY AND NORTH BAY OF BENGAL FROM 25TH MAY TILL 27TH MAY. FISHERMEN OUT AT SEA ARE ADVISED TO RETURN TO THE COAST.

REMARKS:

THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE DURING NEXT 3 DAYS. THUS, MJO PHASE & AMPLITUDE ARE HIGHLY CONDUCIVE FOR CYCLOGENESIS AND FURTHER INTENSIFICATION OVER THE BAY OF BENGAL (BOB) DURING NEXT 3 DAYS.

STRONG EASTERLY WINDS (5-7 MPS) ARE LIKELY TO PREVAIL OVER NORTH BOB DURING 3 DAYS IN THE LOWER TROPOSPHERIC LEVELS. STRONG WESTERLY WINDS (5-7 MPS) ARE LIKELY TO PREVAIL OVER THE SOUTH & CENTRAL BAY OF BENGAL AND ANDAMAN SEA DURING NEXT 3 DAYS. IN ADDITION, KELVIN WAVES, EQUATORIAL ROSSBY WAVES ARE ALSO PREVAILING OVER SOUTH BAY OF BENGAL & COUPLED WITH MJO. THESE WAVES WILL PROVIDE A CONDUCIVE ENVIRONMENT FOR FURTHER INTENSIFICATION OF DEEP DEPRESSION OVER BOB.

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. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCIVE FOR FURTHER INTENSIFICATION OF SYSTEM.

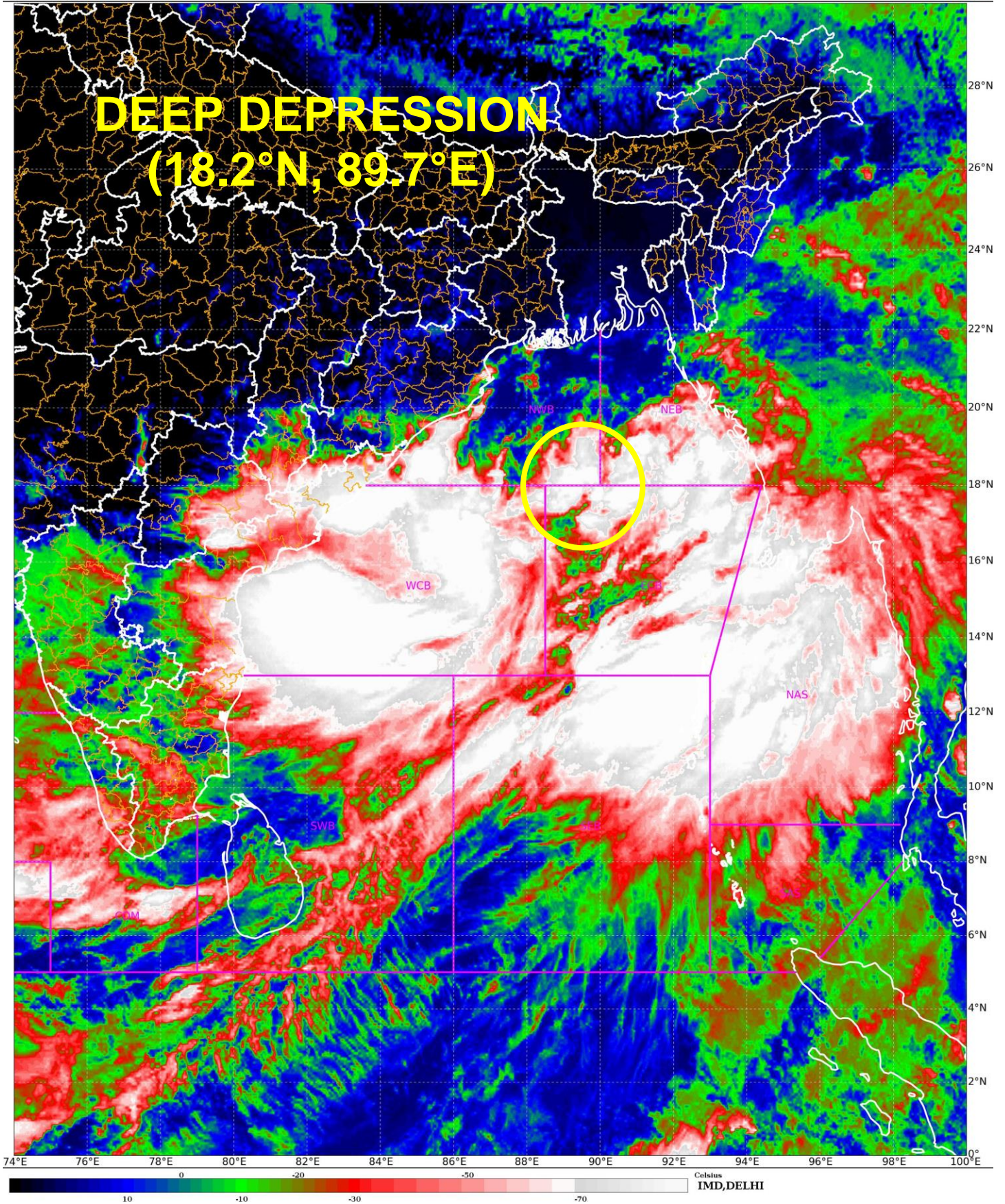
CONSIDERING THE ENVIRONMENTAL CONDITIONS, LOW LEVEL VORTICITY IS THE SAME AND IS ABOUT 150-200x10⁻⁵S⁻¹ TO THE SOUTH OF SYSTEM CENTRE OVER EASTCENTRAL BAY OF BENGAL WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL

CONVERGENCE IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHEAST AND ANOTHER TO THE SOUTHWEST OF THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE HAS INCREASED SIGNIFICANTLY AND ABOUT $50 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST AND $30 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHEAST OF SYSTEM CENTRE. STRONG EQUATORWARD OUTFLOW IS SEEN. VERTICAL WIND SHEAR (VWS) IS MODERATE (AROUND 20 KT) AND IS SLIGHTLY HIGH ALONG THE FORECAST TRACK. MID LEVEL WIND SHEAR IS ANTICYCLONIC OVER THE SYSTEM AREA WHICH WILL SUPPORT FURTHER INTENSIFICATION OF THE SYSTEM. CURRENTLY, THE SYSTEM IS MOVING NEARLY NORTHWARDS ALONG THE PERIPHERY OF THE UPPER TROPOSPHERIC RIDGE AT 200 HPA LOCATED NEAR 17.5°N .

THE GUIDANCE FROM VARIOUS NUMERICAL MODELS IS INDICATING CROSSING OVER BANGLADESH. THE MODELS LIKE IMD GFS, GEFS HAVE ALSO SHIFTED TRACK EASTWARDS. ECMWF IS CONSISTENTLY INDICATING CROSSING OVER WEST BENGAL & ADJOINING BANGLADESH COASTS. IMD MME IS INDICATING CROSSING OVER BANGLADESH 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). HOWEVER, ECMWF IS INDICATING PEAK INTENSIFICATION UPTO CYCLONIC STORM STAGE (35-40 KNOTS).

THE DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL IS VERY LIKELY TO CONTINUE TO MOVE NEARLY NORTHWARDS AND INTENSIFY INTO A CYCLONIC STORM OVER EASTCENTRAL & ADJOINING NORTH BAY OF BENGAL BY 1500 UTC OF 25TH MAY. CONTINUING TO MOVE FURTHER NORTHWARDS, IT WOULD INTENSIFY INTO A SEVERE CYCLONIC STORM BY 0000 UTC OF 26TH MAY AND CROSS BANGLADESH & ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND (42731) AND KHEPUPARA (41984) BY 1800 UTC OF 26TH MAY AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 110-120 GUSTING TO 135 KMPH.

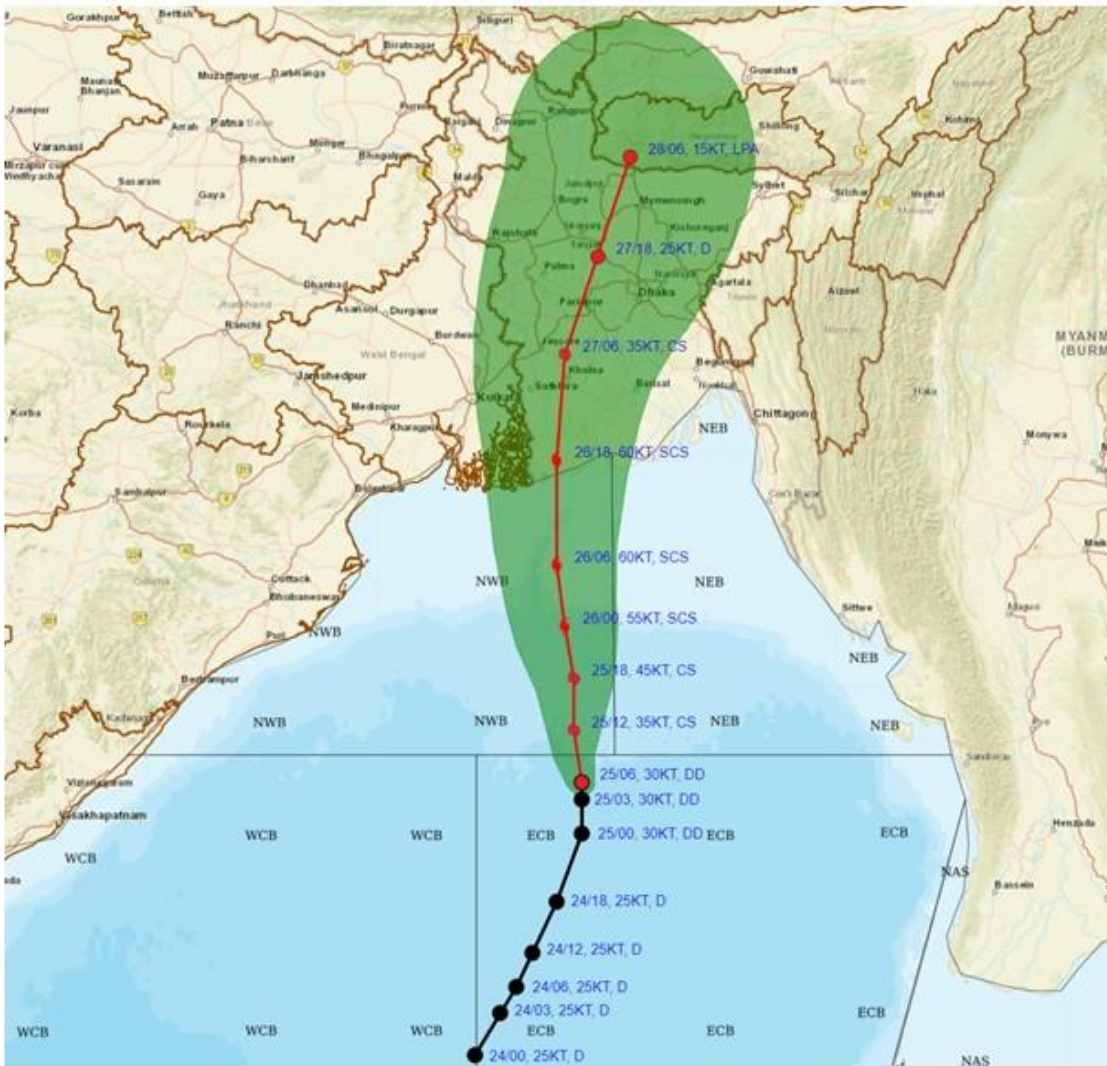
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Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : 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 DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 25TH 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)
 VSXS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

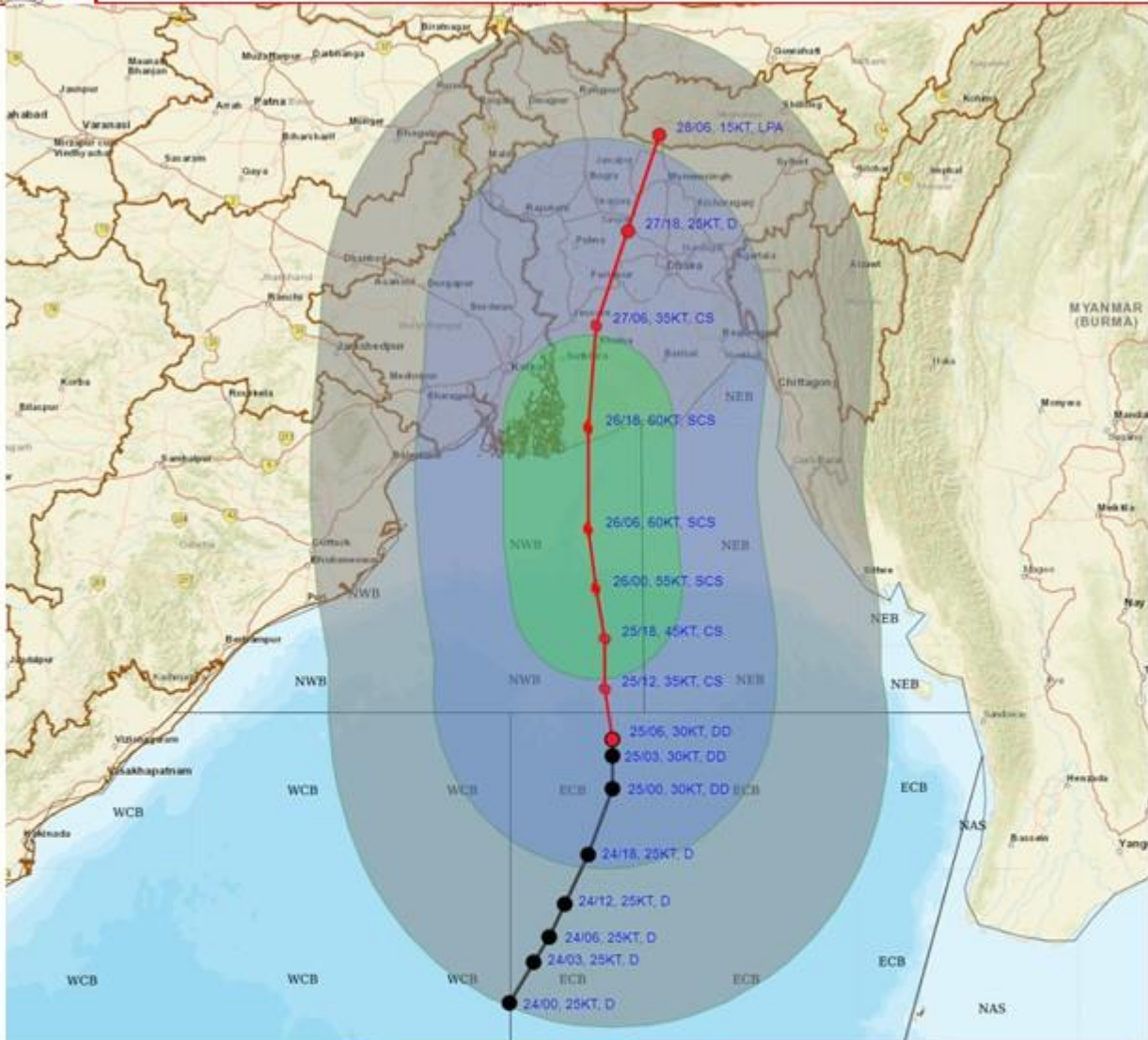
- LESS THAN 34 KT
- 34.47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- ▲ CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS		
Date and Time (UTC)	Canning	Khepupara	Sagar Island
25.05.24/0600	460, SSE	420, S	420, SSE
26.05.24/0600	180, SSE	160, SSW	180, SE
27.05.24/0600	130, NE	150, NNW	220, NE

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FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 25TH 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)

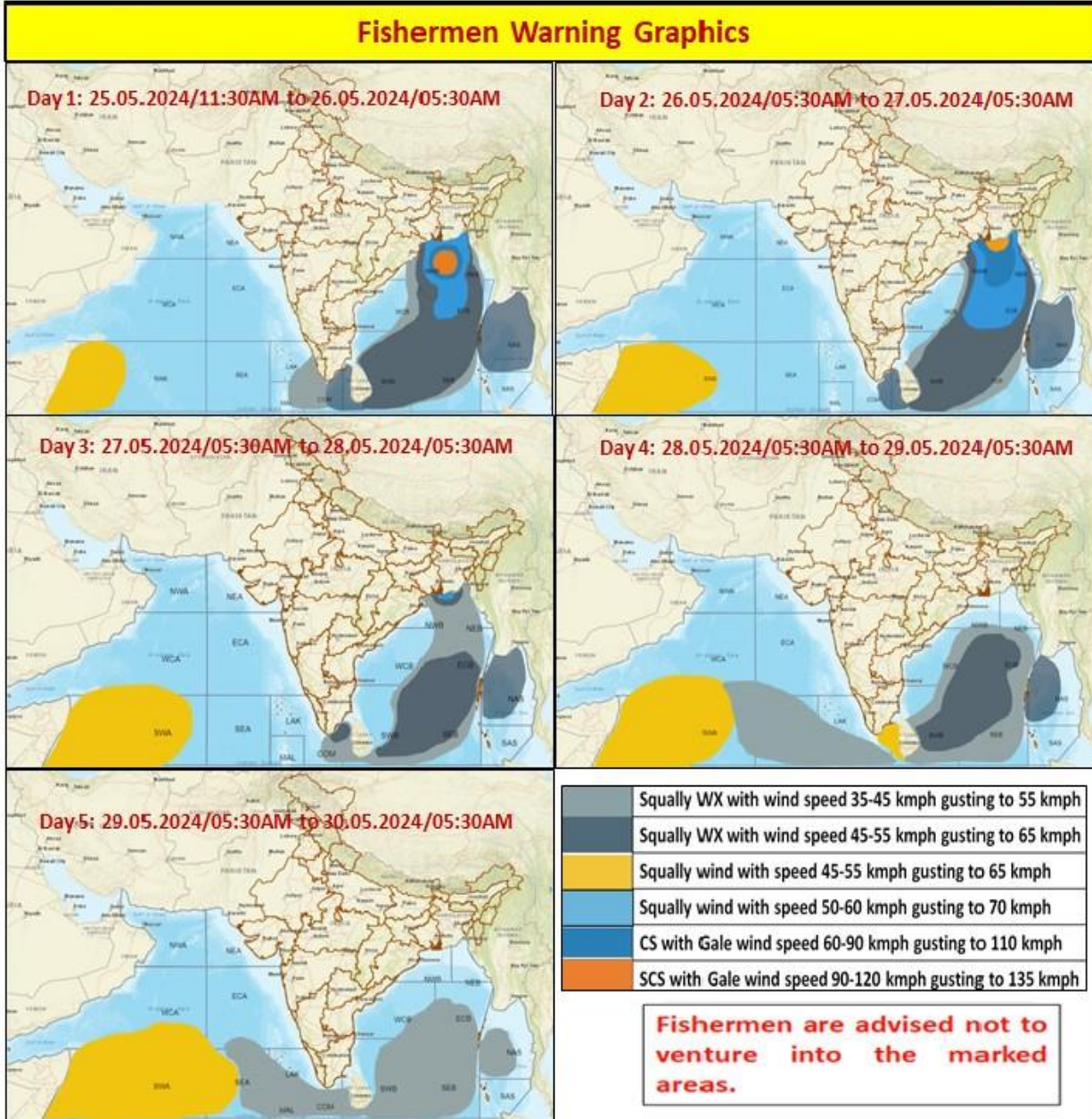
● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ● CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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

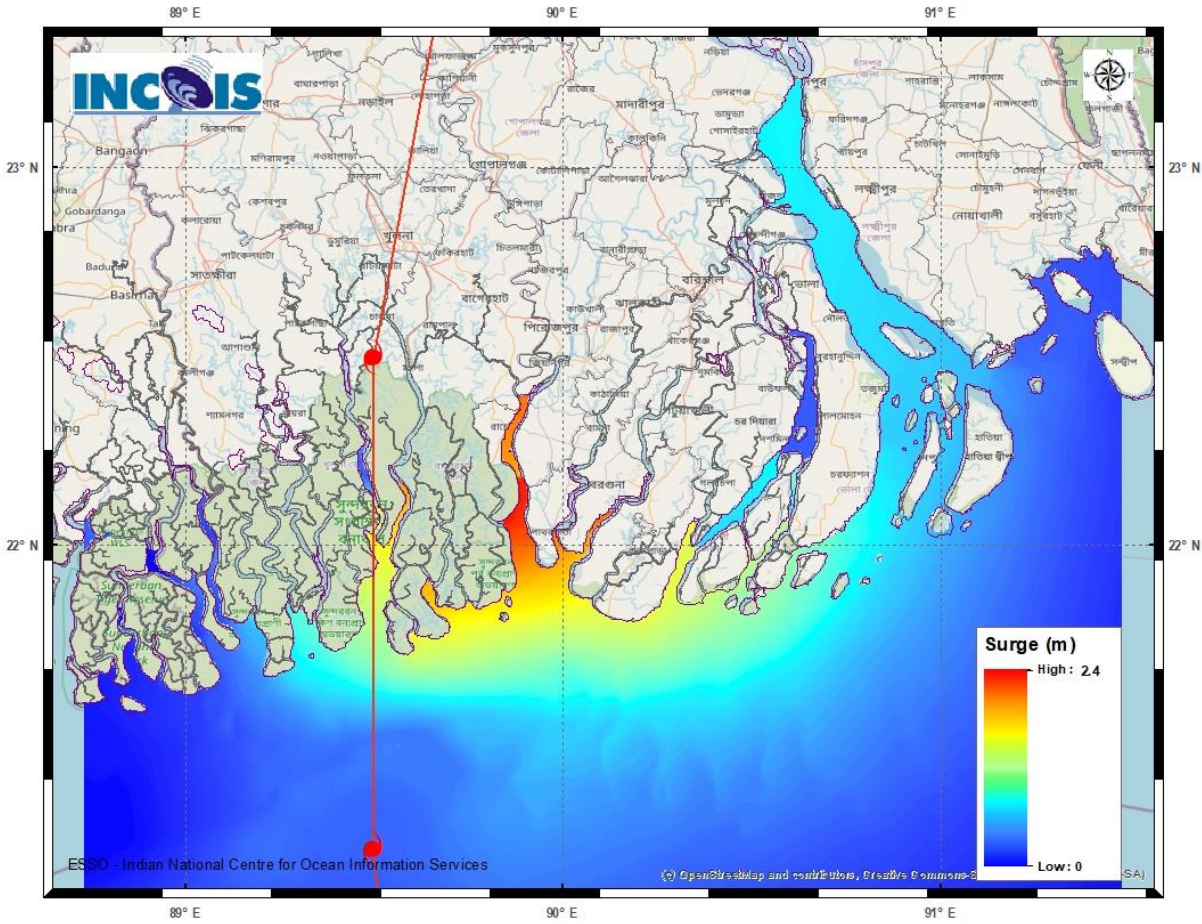
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Fishermen Warning Graphics



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Storm Surge Warning Graphics



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