



**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 0330 UTC OF 25.05.2024 BASED ON 0000 UTC OF 25.05.2024.

BAY OF BENGAL:

THE DEPRESSION OVER EASTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS, **INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTERED AT 0000 UTC OF 25TH MAY, 2024 OVER EASTCENTRAL BAY OF BENGAL** NEAR LATITUDE 17.6°N AND LONGITUDE 89.7°E, ABOUT 490 KM SOUTH OF KHEPUPARA (41984, BANGLADESH), ABOUT 380 KM SOUTH-SOUTHEAST OF SAGAR ISLANDS (42731, WEST BENGAL) AND 530 KM SOUTH-SOUTHEAST OF CANNING (42812, WEST BENGAL).

IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS AND INTENSIFY INTO A **CYCLONIC STORM** OVER EASTCENTRAL AND ADJOINING NORTH BAY OF BENGAL **BY 1200 UTC OF TODAY, THE 25TH MAY**. IT IS LIKELY TO CONTINUE TO MOVE NEARLY NORTHWARDS, INTENSIFY INTO A **SEVERE CYCLONIC STORM** OVER NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL **BY 0000 UTC OF 26TH MAY**. CONTINUING TO MOVE NEARLY NORTHWARDS, THEREAFTER IT IS VERY LIKELY TO **CROSS BANGLADESH AND ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND (42731, WEST BENGAL) AND KHEPUPARA (41984, BANGLADESH), BY 1600-1800 UTC OF 26TH MAY 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
25.05.24/0000	17.6/89.7	50-60 GUSTING TO 70	DEEP DEPRESSION
25.05.24/0600	18.1/89.8	60-70 GUSTING TO 80	CYCLONIC STORM
25.05.24/1200	18.5/89.8	70-80 GUSTING TO 90	CYCLONIC STORM
25.05.24/1800	19.1/89.7	80-90 GUSTING TO 100	CYCLONIC STORM
26.05.24/0000	19.9/89.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
26.05.24/1200	21.2/89.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
27.05.24/0000	22.5/89.5	70-80 GUSTING TO 90	CYCLONIC STORM
27.05.24/1200	23.6/89.7	50-60 GUSTING TO 70	DEEP DEPRESSION
28.05.24/0000	24.7/90.1	35-45 GUSTING TO 55	DEPRESSION

AS PER INSAT-3D IMAGERY, THE CONVECTION HAS FURTHER ORGANISED. INTENSITY OF THE SYSTEM IS T2.0 CENTERED AT 17.6⁰N LATITUDE AND 89.5⁰E LONGITUDE. 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 -93⁰C). SCATTERED LOW AND MEDIUM CLOUDS WITH 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.

AS PER LATEST OBSERVATIONS, ESTIMATED CENTRAL PRESSURE IS 993 HPA AT 0000 UTC. BOUY AND SHIP DATA AT 0000 UTC ARE AS FOLLOWS:

BOUY (LAT°N/LONG°E)	SHIP (LAT°N/LONG°E)	WIND DIRECTION°/ SPEED (KNOTS)	MSLP(hPa)
17.8/89.2	-	352.0/4.2	993.1
17.5/89.2	-	116.0/0	993.6

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 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 0000 UTC FOR SUBSEQUENT 24 HOURS AND DECREASE THEREAFTER.

(B) ALONG & OFF BANGLADESH AND WEST BENGAL & ADJOINING ODISHA 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 25TH MAY 1200 UTC 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 EVENING OF 26TH 1200 UTC FOR SUBSEQUENT 12 HOURS.

(C) ALONG & OFF ODISHA COASTS:

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

(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 AND TRIPURA 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 25TH 1200 UTC TILL 27TH MAY 0000 UTC.

(B) ALONG & OFF BANGLADESH AND WEST BENGAL COASTS

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

(C) ALONG & OFF NORTH ODISHA COAST:

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

(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 ABOVE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF COASTAL WEST BENGAL AND 3-4 M 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 7 DAYS. THUS, MJO PHASE & AMPLITUDE ARE HIGHLY CONDUCIVE FOR CYCLOGENESIS AND FURTHER INTENSIFICATION OVER THE BAY OF BENGAL (BOB) DURING NEXT 5 DAYS.

STRONG EASTERLY WINDS (5-7 MPS) ARE LIKELY TO PREVAIL OVER CENTRAL BOB DURING NEXT 24 HOURS & NORTH BOB DURING SUBSEQUENT 3-4 DAYS IN THE LOWER TROPOSPHERIC LEVELS. STRONG WESTERLY WINDS (5-7 MPS) ARE LIKELY TO PREVAIL OVER THE SOUTH BAY OF BENGAL AND ANDAMAN SEA DURING NEXT 5 DAYS AND OVER CENTRAL BAY OF BENGAL DURING 25TH TO 27TH MAY. IN ADDITION, KELVIN WAVES, EQUATORIAL ROSSBY WAVES ARE PREVAILING OVER SOUTH BAY OF BENGAL & COUPLED WITH MJO. THESE WAVES WILL PROVIDE A CONDUCIVE ENVIRONMENT FOR CYCLOGENESIS AND INTENSIFICATION OF SYSTEM 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 CYCLOGENESIS AND INTENSIFICATION.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, LOW LEVEL VORTICITY HAS INCREASED AND NOW IS ABOUT $150-200 \times 10^{-5} \text{S}^{-1}$ TO THE EAST OF SYSTEM CENTRE OVER EASTCENTRAL & ADJOINING WESTCENTRAL BAY OF BENGAL WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS ABOUT $20 \times 10^{-5} \text{S}^{-1}$ TO THE EAST-NORTHEAST OF THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{S}^{-1}$ AND $30 \times 10^{-5} \text{S}^{-1}$ TO SOUTHEAST AND SOUTHWEST OF THE SYSTEM CENTER, RESPECTIVELY. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (15-20 M/S) ORIENTED THE EAST-WEST OF THE SYSTEM CENTRE AND ALONG THE FORECAST TRACK. IT IS HIGH TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE HIGH WIND SHEAR TO THE SOUTHWEST IS HELPING THE SYSTEM TO SEGREGATE ITSELF FROM THE COMORIAN AREA CONVECTION. MID LEVEL WIND SHEAR IS ANTICYCLONIC OVER CENTRAL AND NORTHWEST BOB. VWS WILL THUS SUPPORT FURTHER INTENSIFICATION OF SYSTEM. CURRENTLY, THE SYSTEM IS MOVING NORTHEASTWARDS UNDER THE INFLUENCE OF SOUTHWESTERLY WINDS ASSOCIATED WITH ADVANCE OF SOUTHWEST MONSOON OVER THE SOUTH BAY OF BENGAL. THE UPPER TROPOSPHERIC RIDGE AT 200 HPA IS LOCATED NEAR 18.7°N .

VARIOUS MODELS ARE INDICATING INTENSIFICATION INTO CYCLONIC STORM AROUND 25TH 0600 UTC FURTHER INTO SEVERE CYCLONIC STORM BY 26TH 0000 UTC. THERE IS SOME DIVERGENCE AMONG MODELS WITH RESPECT TO MOVEMENT OF THE SYSTEM AND ITS LANDFALL POINT AND TIME.

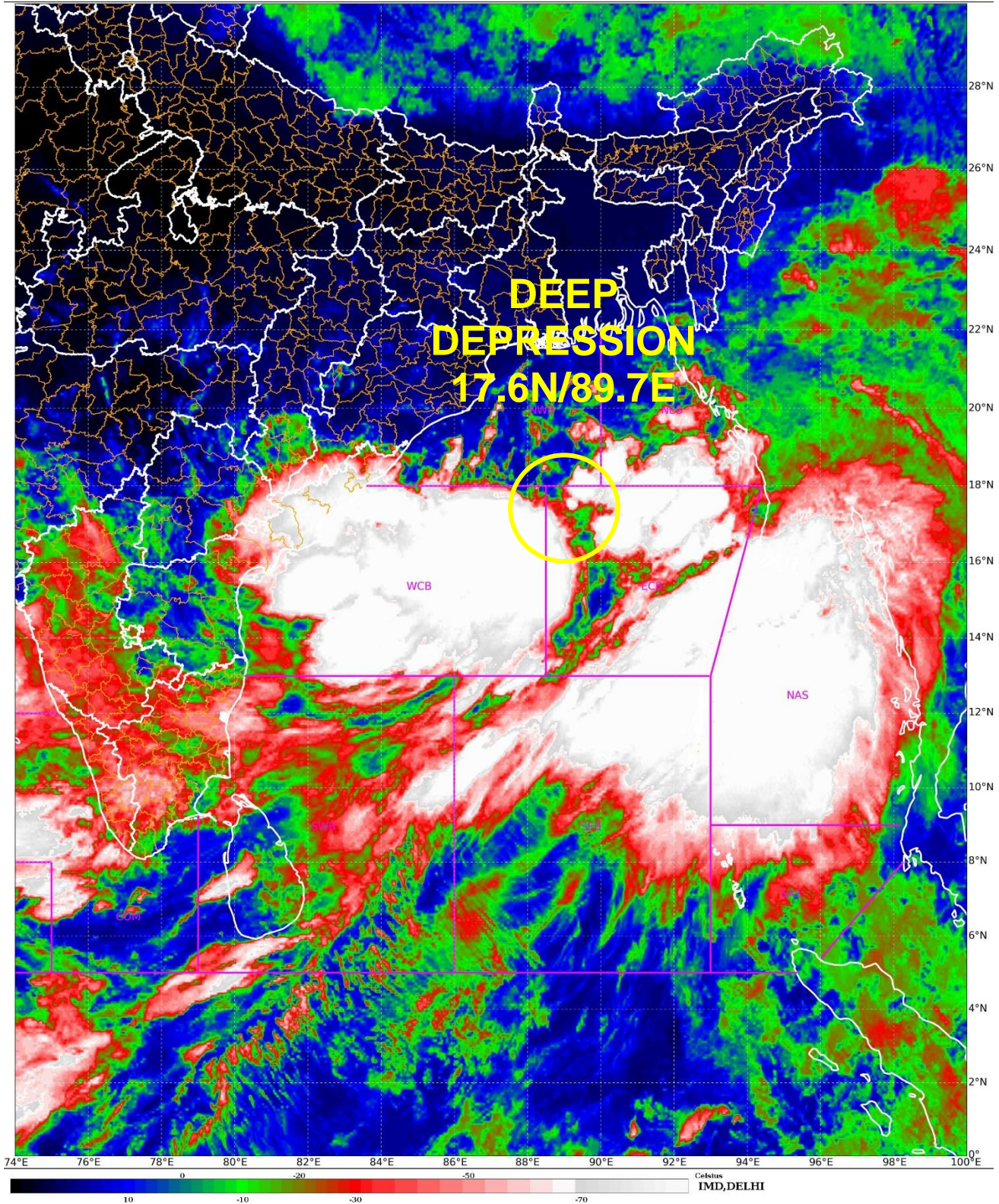
CONSIDERING ALL THE ABOVE, THE DEPRESSION OVER EASTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS, **INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTERED AT 0000 UTC OF 25TH MAY, 2024 OVER EASTCENTRAL BAY OF BENGAL** NEAR LATITUDE 17.8°N AND LONGITUDE 89.7°E , ABOUT 490 KM SOUTH OF KHEPUPARA (41984, BANGLADESH), ABOUT 380 KM SOUTH-SOUTHEAST OF SAGAR ISLANDS (42731, WEST BENGAL) AND 530 KM SOUTH-SOUTHEAST OF CANNING (42812, WEST BENGAL).

IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS AND INTENSIFY INTO A **CYCLONIC STORM** OVER EASTCENTRAL AND ADJOINING NORTH BAY OF BENGAL **BY 1200 UTC OF TODAY, THE 25TH MAY**. IT IS LIKELY TO CONTINUE TO MOVE NEARLY NORTHWARDS, INTENSIFY INTO A **SEVERE CYCLONIC STORM** OVER NORTHWEST AND ADJOINING NORTHEAST BAY OF BENGAL **BY 0000 UTC OF 26TH MAY**. CONTINUING TO MOVE NEARLY NORTHWARDS, THEREAFTER IT IS VERY LIKELY TO **CROSS BANGLADESH AND ADJOINING WEST BENGAL COASTS BETWEEN SAGAR ISLAND (42731, WEST BENGAL) AND KHEPUPARA (41984, BANGLADESH), BY 1600-1800 UTC OF 26TH MAY AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 110-120 GUSTING TO 135 KMPH.**

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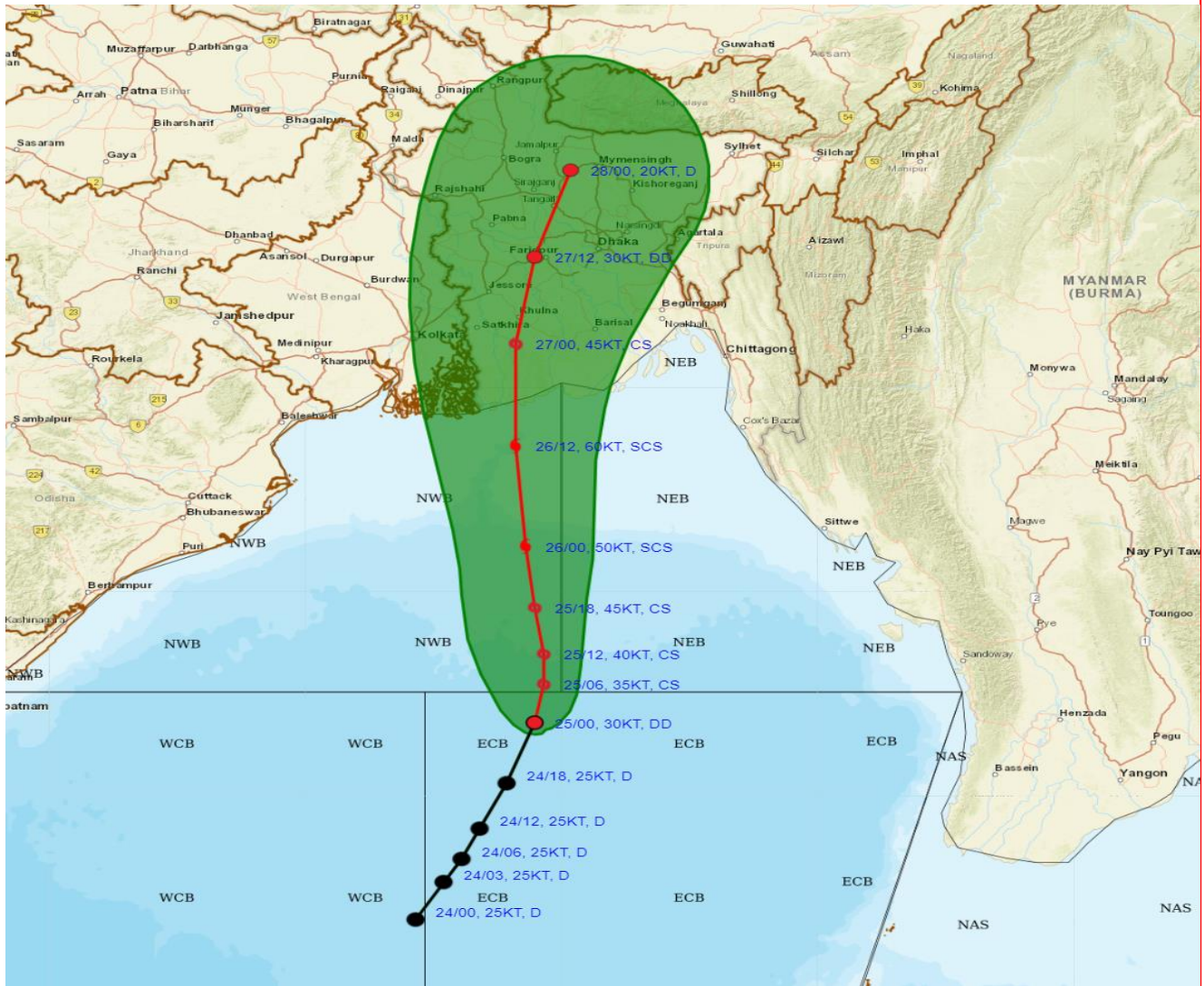
RSMC, NEW DELHI



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 DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0000 UTC (0530 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)

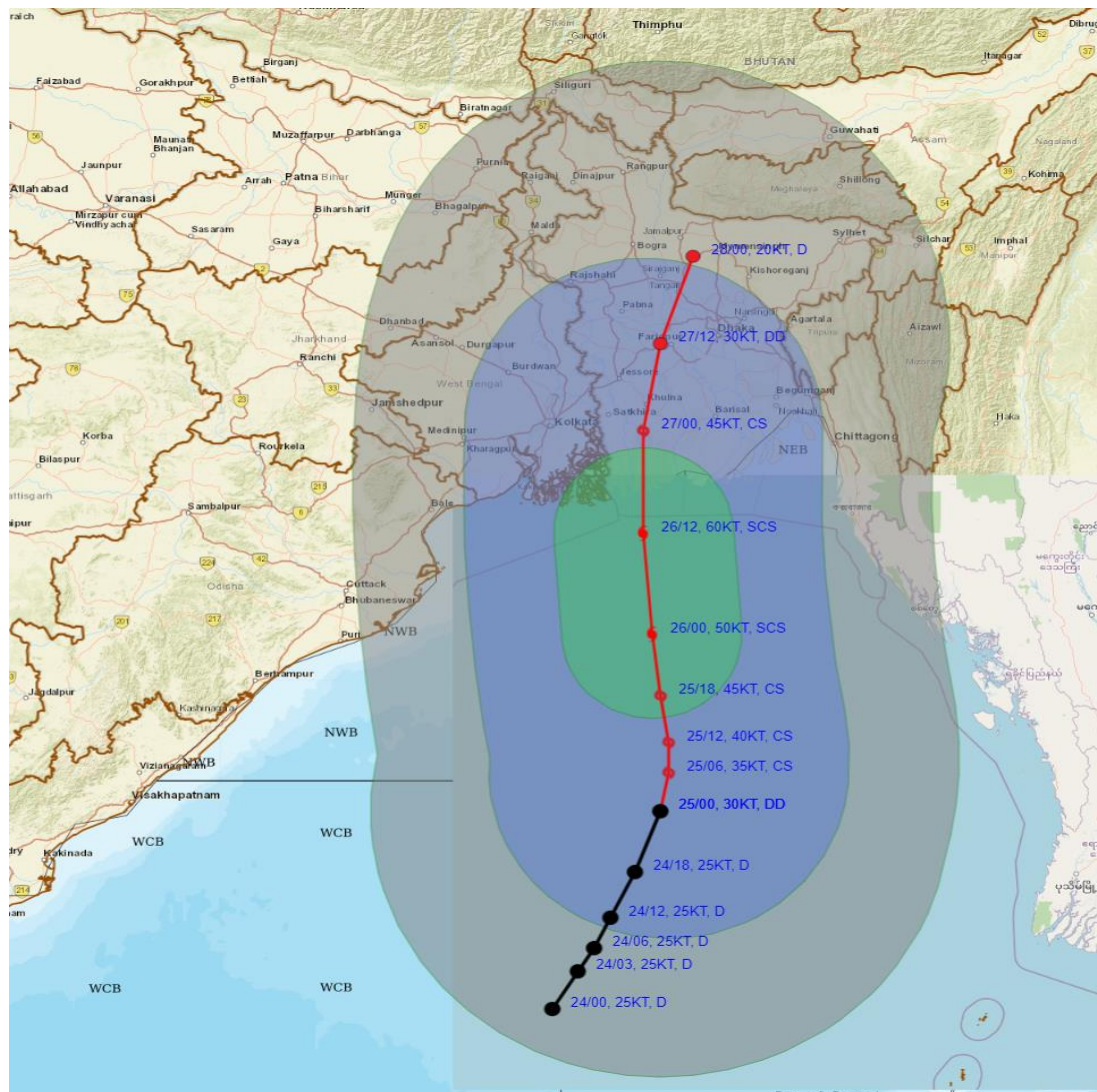
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS		
Date and Time (UTC)	Canning	Khepupara	SAGAR ISLAND
25.05.24/0000	520, SSE	490, S	480, SSE
26.05.24/0000	270, SSE	240, SSW	250, SE
27.05.24/0000	100, ENE	100, NW	180, ENE

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FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0000 UTC (0530 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)

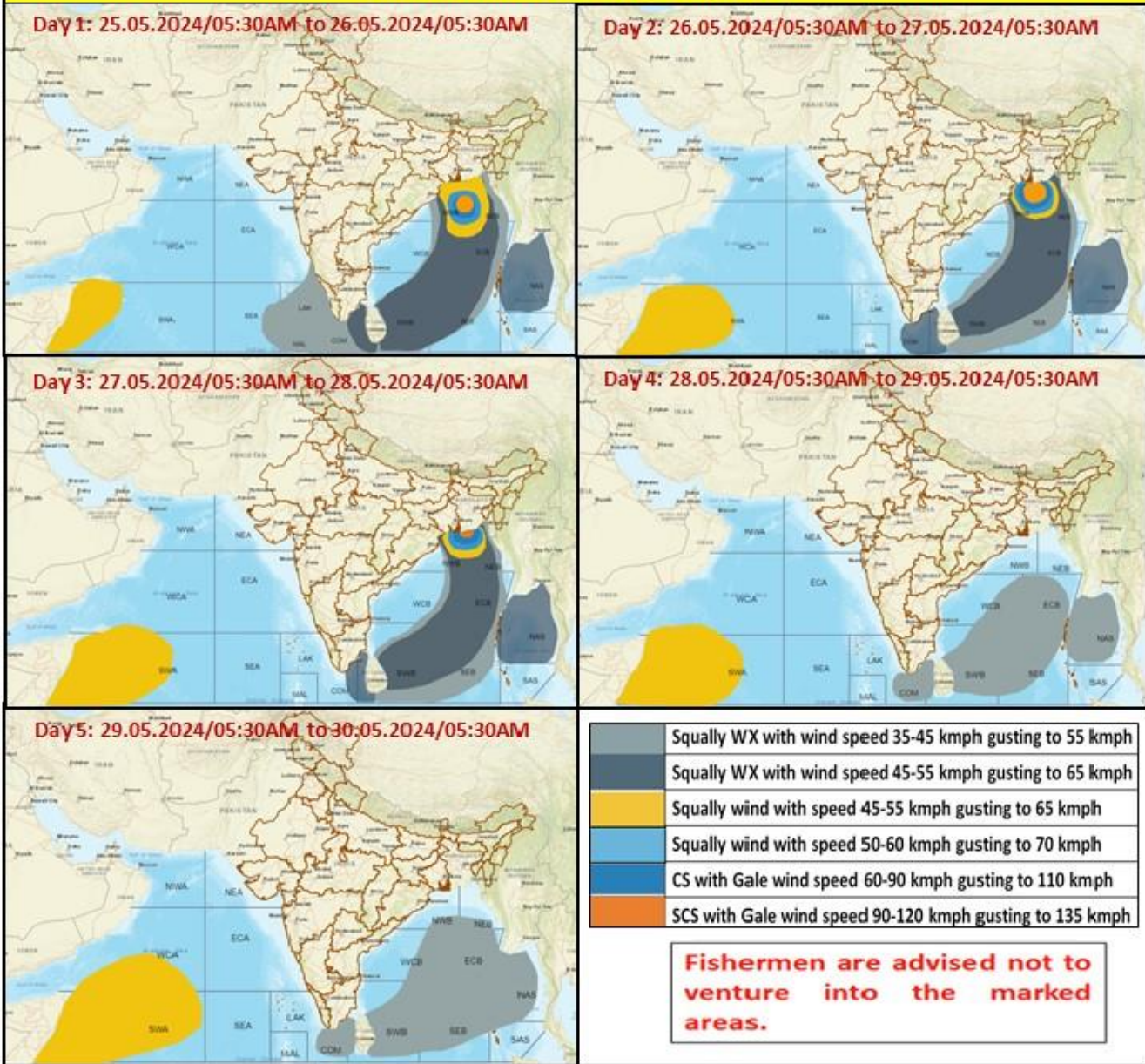
● LESS THAN 34 KT
 ○ 34.47 KT
 ○ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

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

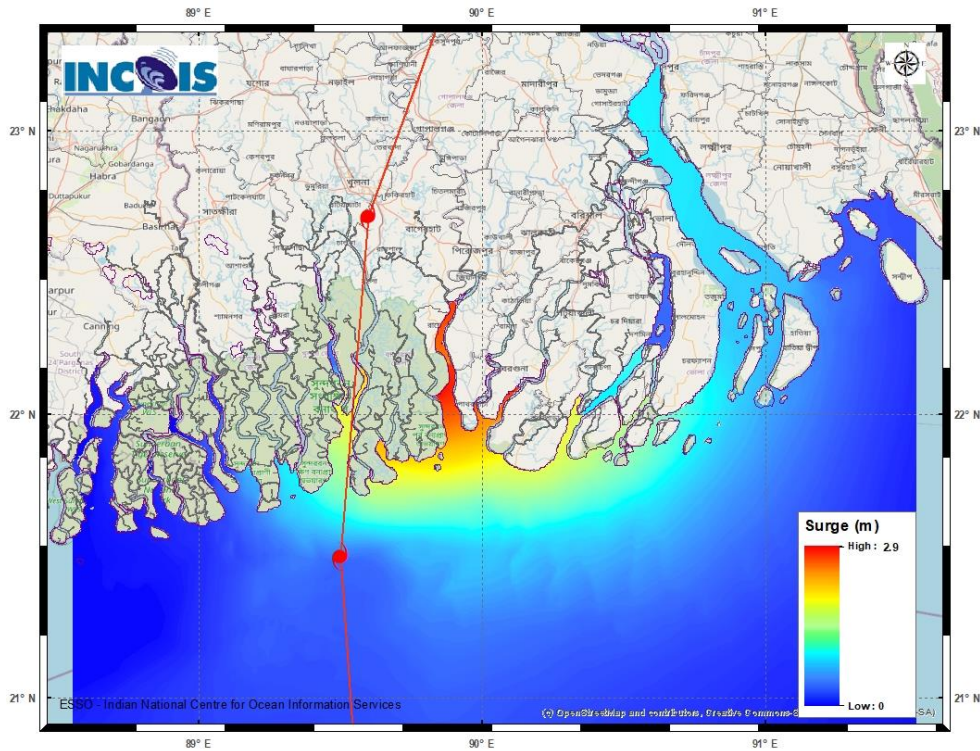
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Fishermen Warning Graphics



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Storm Surge Warning Graphic



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