



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**  
**TROPICAL CYCLONE ADVISORY NO. 2**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 11.05.2023**

**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. 2 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 11.05.2023 BASED ON 0300 UTC OF 11.05.2023**

**SUBJECT: CYCLONIC STORM “MOCHA” PRONOUNCED AS “MOKHA” over SOUTHEAST BAY OF BENGAL**

THE CYCLONIC STORM “MOCHA” PRONOUNCED AS “MOKHA” OVER SOUTHEAST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 06 HOURS, AND LAY CENTERED AT 0300 UTC OF 11TH MAY 2023 OVER THE SAME REGION NEAR LATITUDE 11.4°N AND LONGITUDE 88.0°E, ABOUT 510 KM WEST-SOUTHWEST OF PORT BLAIR (INDIA, 43333), 1190 KM SOUTH-SOUTHWEST OF COX’S BAZAR (BANGLADESH, 41992) AND 1100 KM SOUTH-SOUTHWEST OF SITTWE (MYANMAR, 48062).

IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND GRADUALLY INTENSIFY INTO A SEVERE CYCLONIC STORM AROUND 1800 UTC OF TODAY, THE 11TH MAY. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY, MOVE NORTH-NORTHEASTWARDS FROM 0000 UTC OF 12TH MAY AND INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM AROUND 1200 UTC OF 12TH MAY EVENING OVER CENTRAL BAY OF BENGAL. IT WOULD REACH ITS PEAK INTENSITY AROUND 1200 UTC OF 13TH MAY. IT IS LIKELY TO CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX’S BAZAR (BANGLADESH, 41992) AND KYAUKPYU (MYANMAR, 48071), CLOSE TO SITTWE (MYANMAR) AROUND 0600 UTC OF 14TH MAY, 2023 WITH MAXIMUM SUSTAINED WIND SPEED OF 140-150 KMPH GUSTING TO 165 KMPH.

**FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:**

<b>DATE/TIME (UTC)</b>	<b>POSITION LAT. °N/ LONG. °E</b>	<b>MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)</b>	<b>CATEGORY OF CYCLONIC DISTURBANCE</b>
11.05.23/0300	11.4/88.0	65-75 gusting to 85	CYCLONIC STORM
11.05.23/0600	11.7/88.0	70-80 gusting to 90	CYCLONIC STORM

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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11.05.23/1200	12.2/87.9	80-90 gusting to 100	CYCLONIC STORM
11.05.23/1800	12.7/87.9	90-100 gusting to 110	SEVERE CYCLONIC STORM
12.05.23/0000	13.2/88.0	110-120 gusting to 130	SEVERE CYCLONIC STORM
12.05.23/1200	14.3/88.5	120-130 gusting to 145	VERY SEVERE CYCLONIC STORM
13.05.23/0000	15.8/89.3	130-140 gusting to 155	VERY SEVERE CYCLONIC STORM
13.05.23/1200	17.4/90.5	140-150 gusting to 165	VERY SEVERE CYCLONIC STORM
14.05.23/0000	19.0/91.8	140-150 gusting to 165	VERY SEVERE CYCLONIC STORM
14.05.23/1200	21.6/94.0	75-85 gusting to 95	CYCLONIC STORM

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA. SEA CONDITION IS VERY ROUGH TO HIGH OVER SOUTHEAST & ADJOINING EASTCENTRAL BAY OF BENGAL AND ADJOINING AREAS OF ANDAMAN SEA.

AS PER SATELLITE IMAGERY, INTENSITY IS T2.5. CLOUDS ASSOCIATED WITH THE SYSTEM ARE ORGANISED IN CURVED BAND PATTERN. INTENSE CONVECTION IS SEEN IN THE WESTERN SECTOR. ASSOCIATED BROKEN LOW/MED CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 8.0N TO 14.5N AND LONG 83.0E TO 89.0E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93 DEG CELSIUS.

AT 0000 UTC, A BUOY NEAR 10.45°N/94.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1007 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 160<sup>0</sup>/17.5 KTS.

**STORM SURGE GUIDANCE (GRAPHICS ATTACHED) FOR NORTH MYANMAR AND ADJOINING SOUTHEAST BANGLADESH COASTS:**

STORM SURGE WITH HEIGHT OF ABOUT 2.0-2.5 M ABOVE THE ASTRONOMICAL TIDE IS LIKELY TO INUNDATE LOW LYING AREAS OF NORTH MYANMAR AND ADJOINING SOUTHEAST BANGLADESH COASTS DURING THE TIME OF LANDFALL.

**REMARKS:**

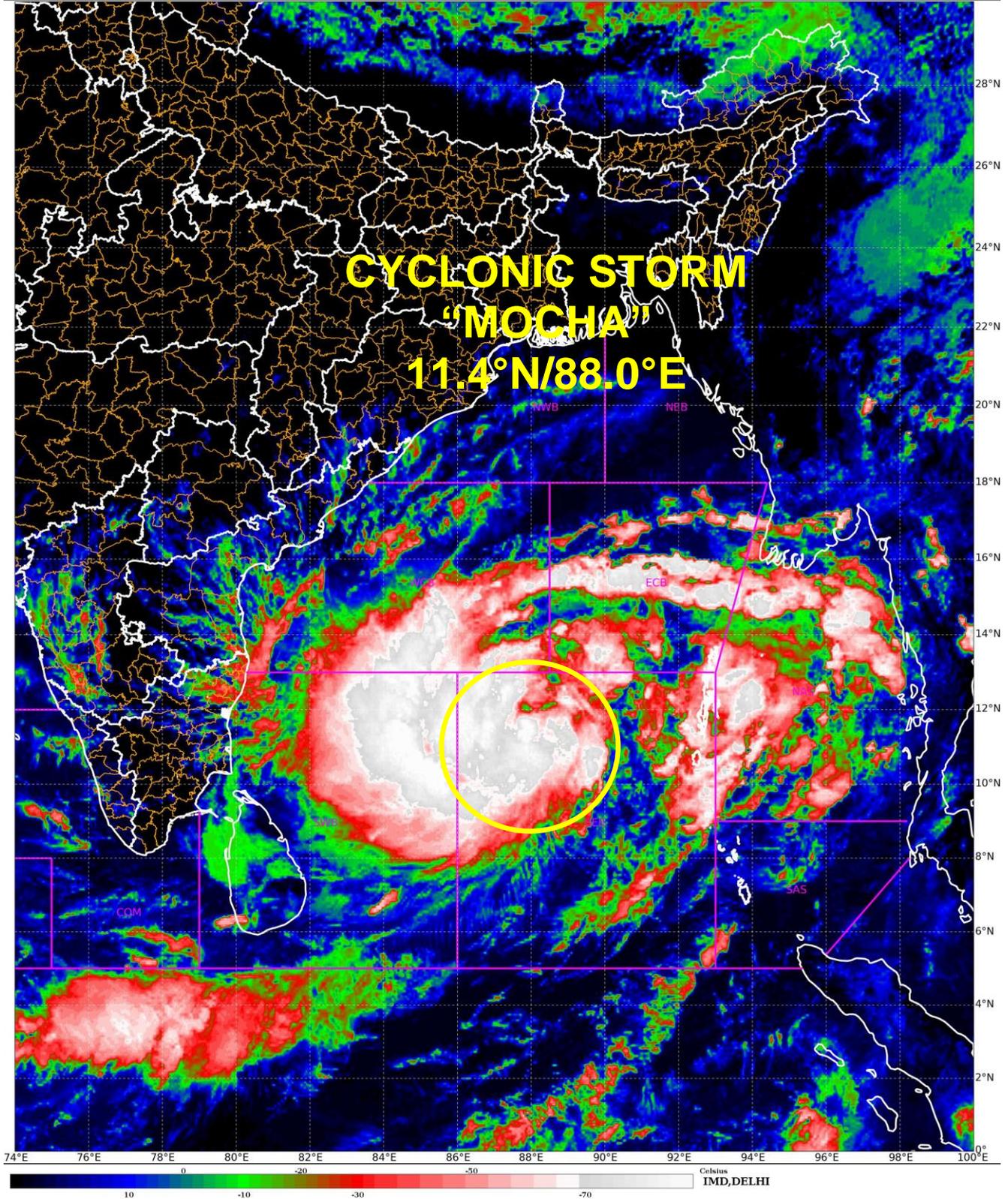
THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM<sup>2</sup> OVER MAJOR PARTS OF SOUTHEAST AND CENTRAL BAY OF BENGAL (BOB). IT IS INDICATING DECREASING TENDENCY ABOUT 60-70 KJ/CM<sup>2</sup> ALONG MYANMAR COAST. SEA SURFACE TEMPERATURE (SST) IS AROUND 30°C OVER SOUTHEAST BOB. IT IS SLIGHTLY HIGHER OVER EASTCENTRAL BOB AROUND 31°C AND LESS OFF MYANMAR COAST. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCIVE FOR FURTHER INTENSIFICATION OF SYSTEM OVER EASTCENTRAL BOB. TOTAL PRECIPITABLE WATER IMAGERY (TPW) INDICATES WARM MOIST AIR INCURSION INTO THE SYSTEM AREA FROM SOUTH.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE LOW LEVEL VORTICITY AT 850 HPA IS AROUND 200X10<sup>-6</sup>S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVELS. LOW LEVEL CONVERGENCE IS AROUND 30 X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS ABOUT 30X10<sup>-5</sup>S<sup>-1</sup> TO THE SOUTHWEST AND ANOTHER ZONE TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR IS LOW TO MODRATE (10-15 KNOTS) OVER THE SYSTEM AREA. STRONG POLEWARD AND EQUATORWARD OUTFLOW IS SEEN. HIGHER SEA SURFACE TEMPERATURE, POLEWARD & EQUATORWARD OUTFLOW AND MODERATE WIND ARE FAVOURABLE CONDITIONS FOR FURTHER INTENSIFICATION OF THE SYSTEM. THE SYSTEM IS LYING IN THE PERIPHERY OF UPPER TROPOSPHERIC RIDGE NEAR 15.0N IN ASSOCIATION WITH ANTI-CYCLONIC CIRCULATION OVER ESATCENTRAL BOB. THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS ALONG IT'S PERIPHERY. ONCE IT CROSSES 15.0N, IT WILL GRADUALLY RECURVE NORTH-NORTHEASTWARDS, TOWARDS MYANMAR-BANGLADESH COASTS.

GUIDANCE FROM VARIOUS NUMERICAL MODELS INCLUDING IMD GFS, NCEP GFS, ECMWF, NCUM, UKMO AND IMD MME ARE NOW CONSISTENT WRT TRACK AND LANDFALL POINT. CURRENT MODEL GUIDANCE IS NOT INDICATING WEAKENING OF THE SYSTEM BEFORE LANDFALL. IMD GFS IS INDICATING LANDFALL AROUND 14/0600 UTC NEAR 20.0N/93.6E. ECMWF IS INDICATING LANDFALL AROUND 14/0900 UTC NEAR 20.5N/92.2E. IMD MME IS INDICATING LANDFALL AROUND 14/1000 UTC NEAR 20.2N/92.9E.

IT IS CONCLUDED THAT, THE CYCLONIC STORM "MOCHA" PRONOUNCED AS "MOKHA" OVER SOUTHEAST BAY OF BENGAL IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND GRADUALLY INTENSIFY INTO A SEVERE CYCLONIC STORM AROUND 1800 UTC OF TODAY, THE 11TH MAY. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY, MOVE NORTH-NORTHEASTWARDS FROM 0000 UTC OF 12TH MAY AND INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM AROUND 1200 UTC OF 12TH MAY EVENING OVER CENTRAL BAY OF BENGAL. IT WOULD REACH ITS PEAK INTENSITY AROUND 1200 UTC OF 13TH MAY. IT IS LIKELY TO CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH, 41992) AND KYAUKPYU (MYANMAR, 48071), CLOSE TO SITTWE (MYANMAR) AROUND 0600 UTC OF 14TH MAY, 2023 WITH MAXIMUM SUSTAINED WIND SPEED OF 140-150 KMPH GUSTING TO 165 KMPH.

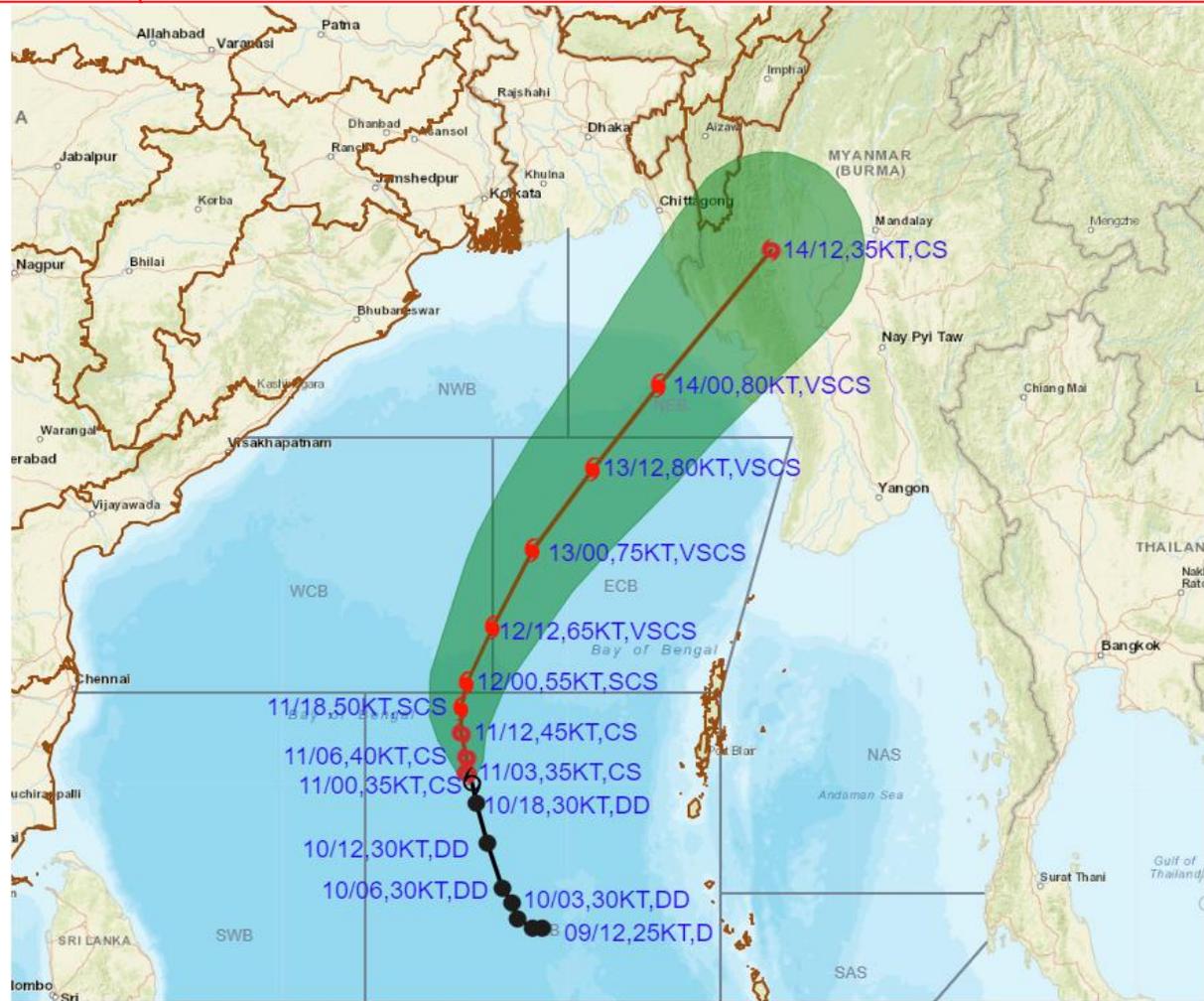
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RSMC NEW DELHI



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# OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 11<sup>TH</sup> MAY 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

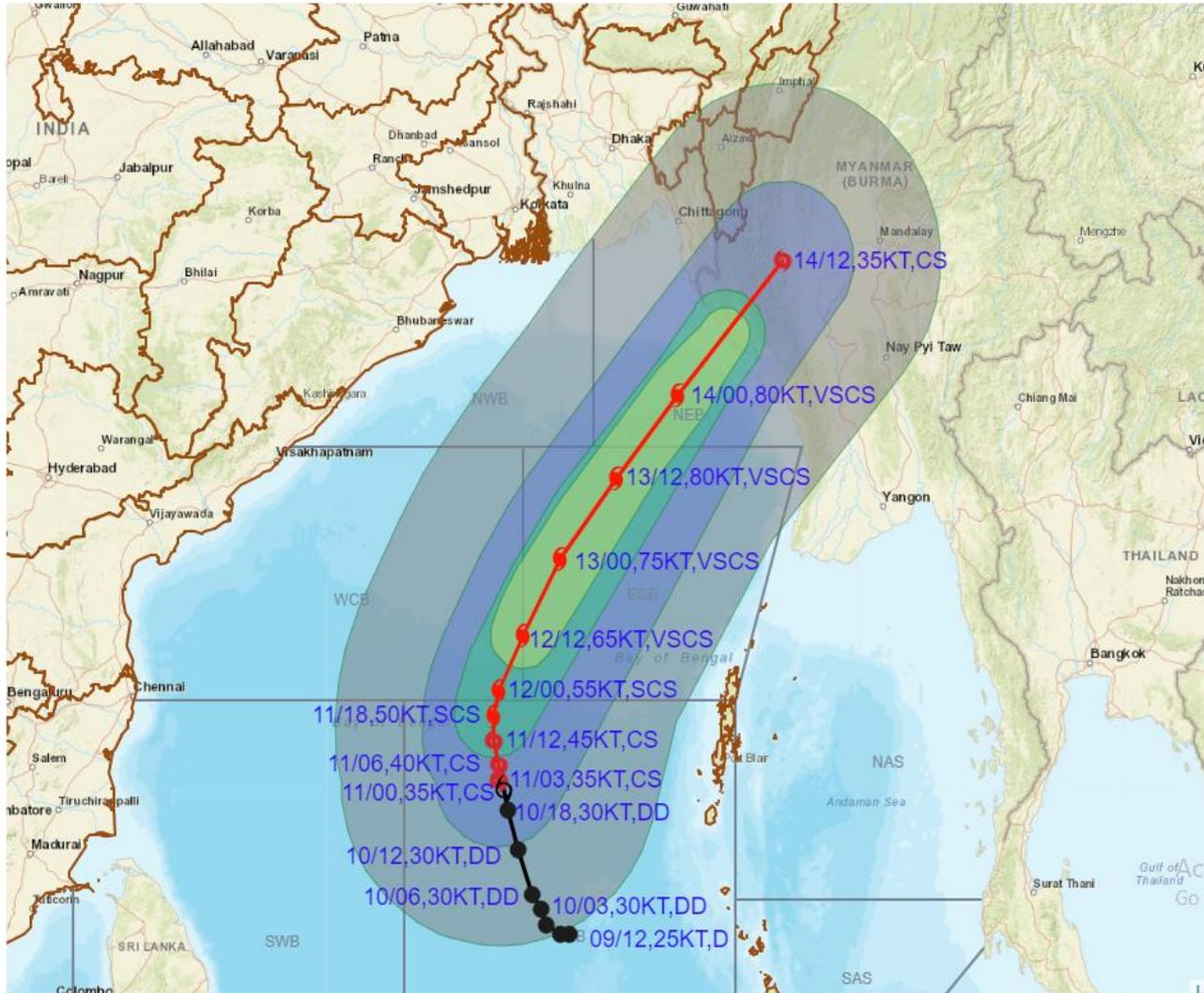
### Forecast distance (km) and direction of the centre from nearest 5 coastal stations

Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
11.05.23/0300	0	11.4	88.0	HUT BAY (505,W)	PORT BLAIR (515,W)	LONG ISLAND (549,WSW)	MAYA BANDAR (561,WSW)	CAR NICOBAR (585,WNW)
12.05.23/0000	21	13.2	88.0	MAYA BANDAR (534,W)	PORT BLAIR (540,WNW)	LONG ISLAND (543,W)	HUT BAY (575,WNW)	COCO ISLAND (589,W)
13.05.23/0000	45	15.8	89.3	COCO ISLAND (476,WNW)	MAYA BANDAR (505,NW)	LONG ISLAND (544,NW)	PARADIP (CWR) (572,SSE)	SANDHEADS (573,SSE)
14.05.23/0000	69	19	91.8	SITTWE (170,SW)	KYAUKPYU (190,WSW)	MANAUNG (204,W)	TEKNAF (214,SSW)	KYAUKTAW (224,SSW)

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**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 11<sup>TH</sup> MAY 2023.**



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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)

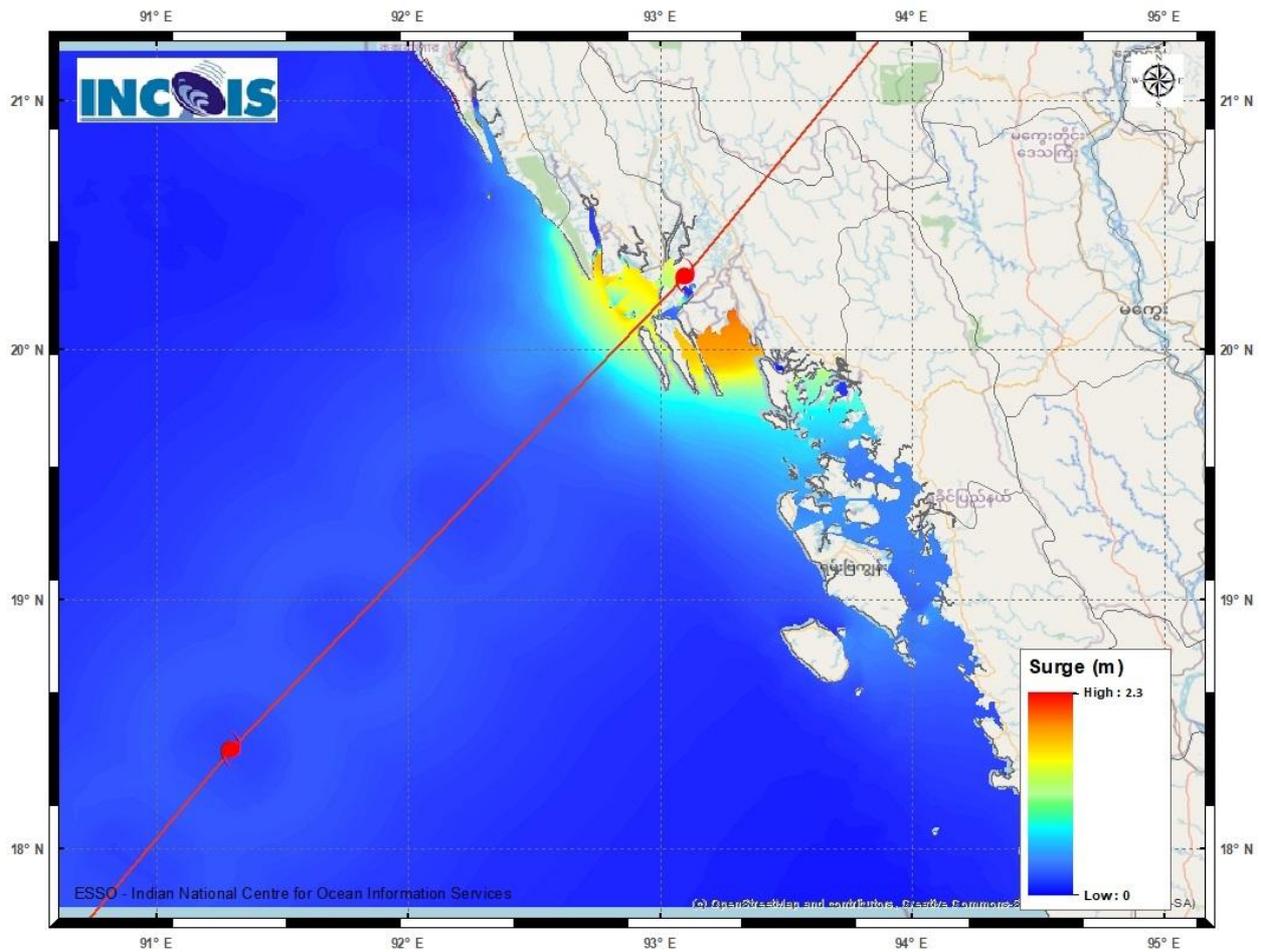
■ ≥ 64 KT (≥ 118 KMPH)

**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

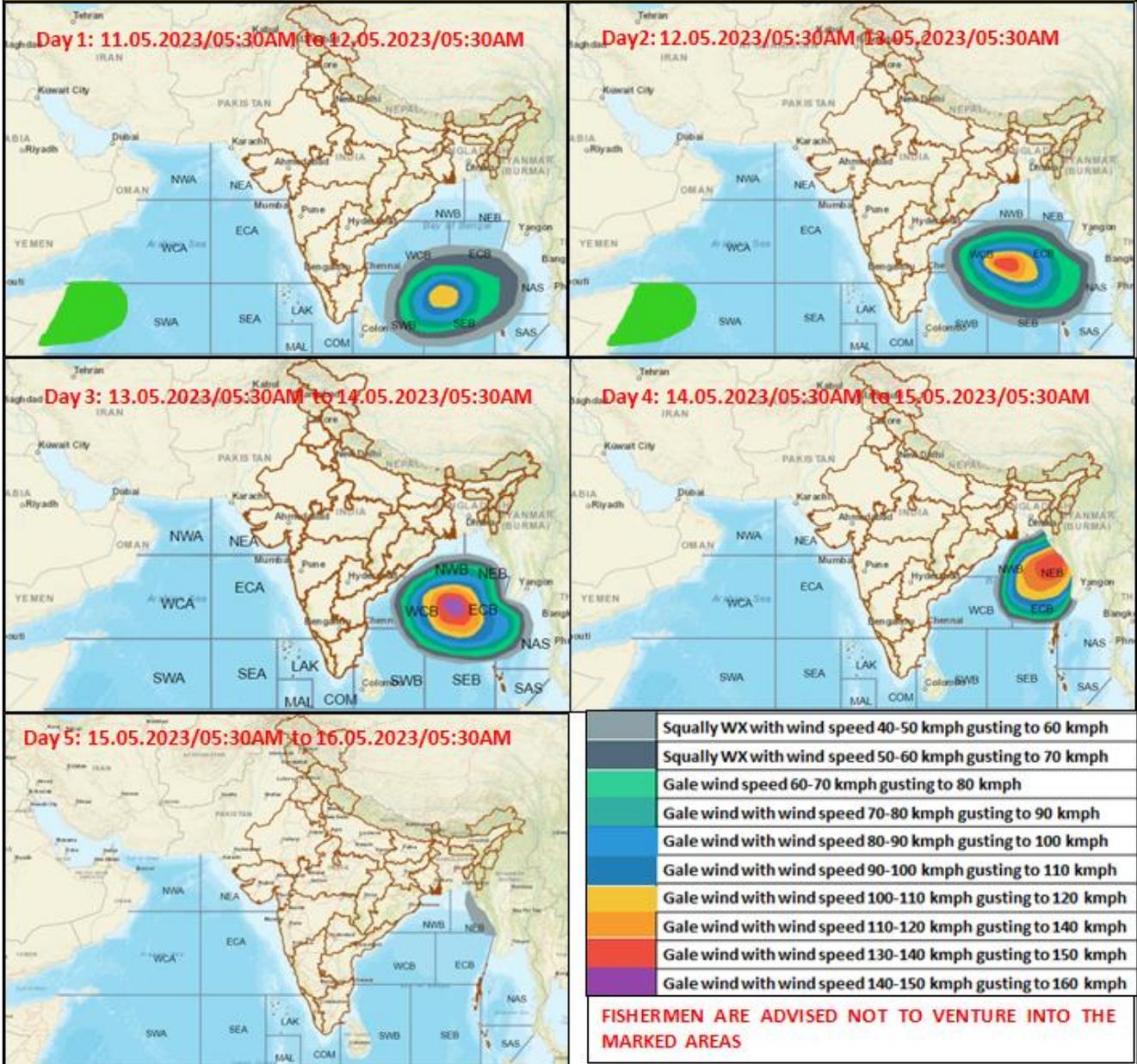
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## Storm Surge Warning Graphics



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## Fishermen warning graphics



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