



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 23

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 13.05.2023

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. 23 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2040 UTC OF 13.05.2023 BASED ON 1800 UTC OF 13.05.2023

SUBJECT: EXTREMELY SEVERE CYCLONIC STORM “MOCHA” (PRONOUNCED AS “MOKHA”) OVER EASTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM “MOCHA”** (PRONOUNCED AS **“MOKHA”**) OVER EASTCENTRAL BAY OF BENGAL MOVED NEARLY NORTH-NORTHEASTWARDS WITH A SPEED OF 18 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF TODAY, THE 13TH MAY 2023 OVER THE SAME REGION NEAR LATITUDE 17.9°N AND LONGITUDE 91.0°E, ABOUT 720 KM NORTH-NORTHWEST OF PORT BLAIR (INDIA, 43333), 400 KM SOUTH-SOUTHWEST OF COX'S BAZAR (BANGLADESH, 41992) AND 310 KM SOUTHWEST OF SITTWE (MYANMAR, 48062).

IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH, 41992) AND KYAUKPYU (MYANMAR, 48071), CLOSE TO SITTWE (MYANMAR, 48062) AROUND NOON OF 14TH MAY, 2023 AS AN EXTREMELY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 180-190 KMPH GUSTING TO 210 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
13.05.23/1800	17.9/91.0	210-220 GUSTING TO 240	EXTREMELY SEVERE CYCLONIC STORM
14.05.23/0000	19.1/91.6	200-210 GUSTING TO 230	EXTREMELY SEVERE CYCLONIC STORM
14.05.23/0600	20.3/92.5	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
14.05.23/1200	21.5/93.4	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
14.05.23/1800	23.0/94.7	50-60 GUSTING TO 70	DEEP DEPRESSION
15.05.23/0000	26.3/97.4	25-35 GUSTING TO 45	LOW PRESSURE

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 115 KNOTS GUSTING TO 125 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 938 HPA. SEA CONDITION IS PHENOMENAL OVER EAST CENTRAL BAY OF BENGAL AND HIGH AND VERY HIGH OVER ADJOINING NORTHEAST BAY OF BENGAL AND ROUGH TO VERY ROUGH OVER ADJOINING WEST CENTRAL BAY OF BENGAL.

AS PER INSAT 3D IMAGERY, INTENSITY IS T 6.0. EYE IS SEEN CLEARLY. EYE DIAMETER IS 22 KM AND EYE TEMPERATURE MINUS 2 DEG CELSIUS. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL AND ADJOINING NORTHEAST, SOUTHEAST AND WESTCENTRAL BAY OF BENGAL BETWEEN 14.0°N & 20.0°N AND 88.5°E & 94.0°E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93 DEG CELSIUS.

AT 1800 UTC A BUOY NEAR 17.3°N/89.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 994 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 310⁰/29.2 KTS.

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

STORM SURGE WITH HEIGHT OF ABOUT 3-3.5 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 ABOUT 50-75 KJ/CM² UPTO NORTHEAST BAY OF BENGAL AND REDUCES MARGINALLY NEAR THE BANGLADESH MYANMAR COAST. SEA SURFACE TEMPERATURE (SST) HAS DECREASED AND IS AROUND 30°C OVER EASTCENTRAL BOB AND ALONG FORECAST TRACK. TOTAL PRECIPITABLE WATER IMAGERY IS INDICATING DRY AIR FROM INDIA REACHING THE SOUTHERN SECTOR IN THE OUTER CORE OF THE SYSTEM.

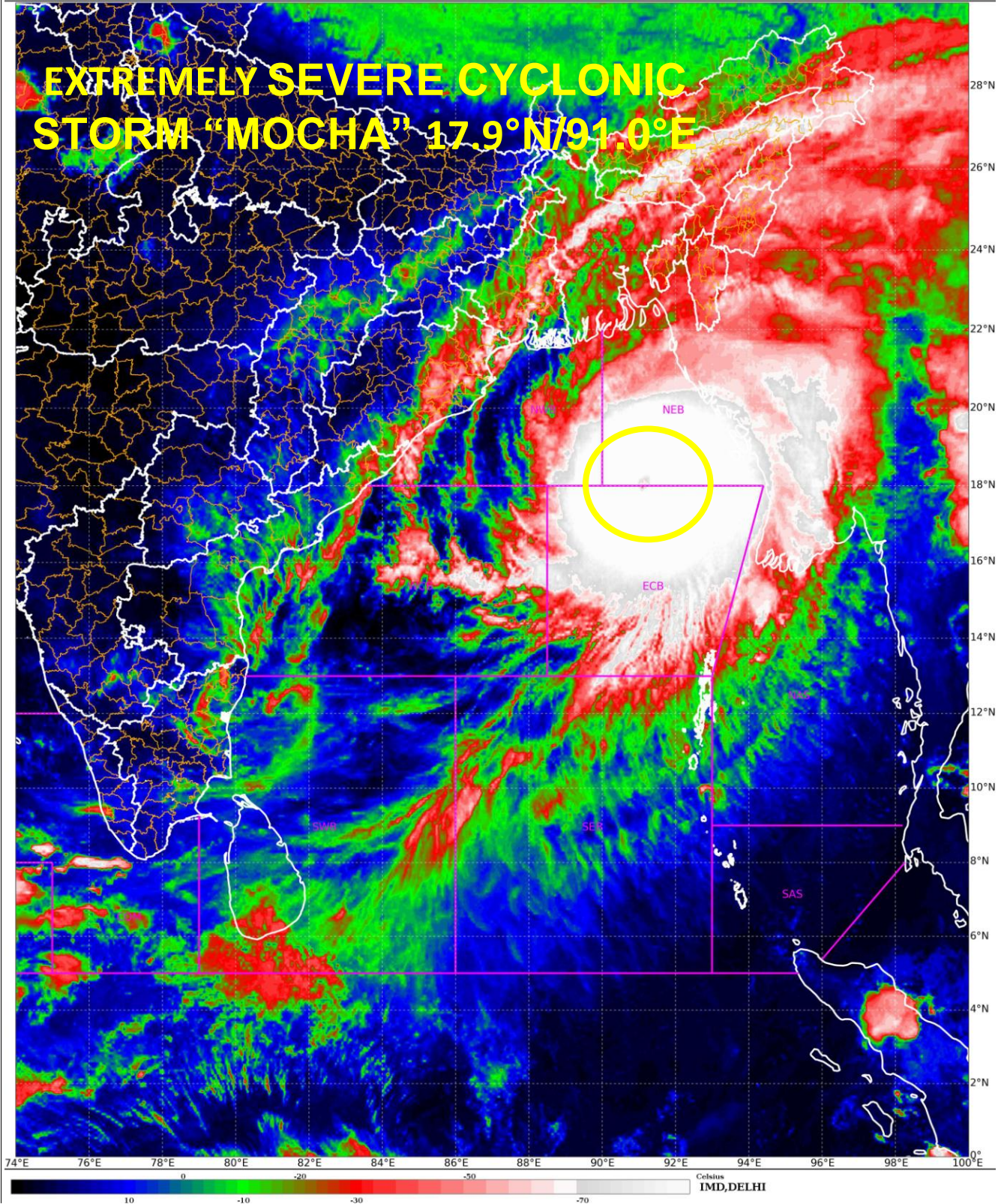
THE LOW LEVEL VORTICITY AT 850 HPA IS AROUND 300X10⁻⁶S⁻¹ AROUND SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVELS. LOW LEVEL CONVERGENCE HAS INCREASED SIGNIFICANTLY AND IS AROUND 50 X10⁻⁵ S⁻¹. IT IS NORTHEAST-SOUTHWEST ORIENTED. SIMILAR TO UPPER LEVEL DIVERGENCE WHICH HAS ALSO INCREASED AND IS ABOUT 30X10⁻⁵S⁻¹ OVER SYSTEM AREA. THE VERTICAL WIND SHEAR IS MODRATE (15-20 KNOTS) AROUND THE SYSTEM CENTER AND THE VALUE IS HIGH ABOUT 25-30 KTS OVER NORTHEAST BAY OF BENGAL AND ALONG & OFF BANGLADESH-MYANMAR COASTS. THE ENVIRONMENTAL CONDITIONS WITH POLEWARD OUTFLOW, WARM SST, HIGHER VALUES OF LOW LEVEL

VORTICITY, INCREASED CONVERGENCE AND DIVERGENCE IS FAVOURING THE CURRENT INTENSITY OF THE SYSTEM.

THERE IS AN ANTICYCLONIC CIRCULATION OVER NORTH ANDAMAN SEA AND ADJOINING AREAS. DEEP LAYER MEAN WINDS INDICATE THAT THE SYSTEM IS EMBEDDED IN THE WESTERLY FLOW. UNDER THE INFLUENCE OF THESE SYSTEMS, IT IS LIKELY TO MOVE NORTH-NORTHEASTWARDS.

IN VIEW OF ALL THE ABOVE, THE EXTREMELY SEVERE CYCLONIC STORM "MOCHA" IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH, 41992) AND KYAUKPYU (MYANMAR, 48071), CLOSE TO SITTWE (MYANMAR, 48062) AROUND NOON OF 14TH MAY, 2023 AS AN EXTREMELY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 180-190 KMPH GUSTING TO 210 KMPH.

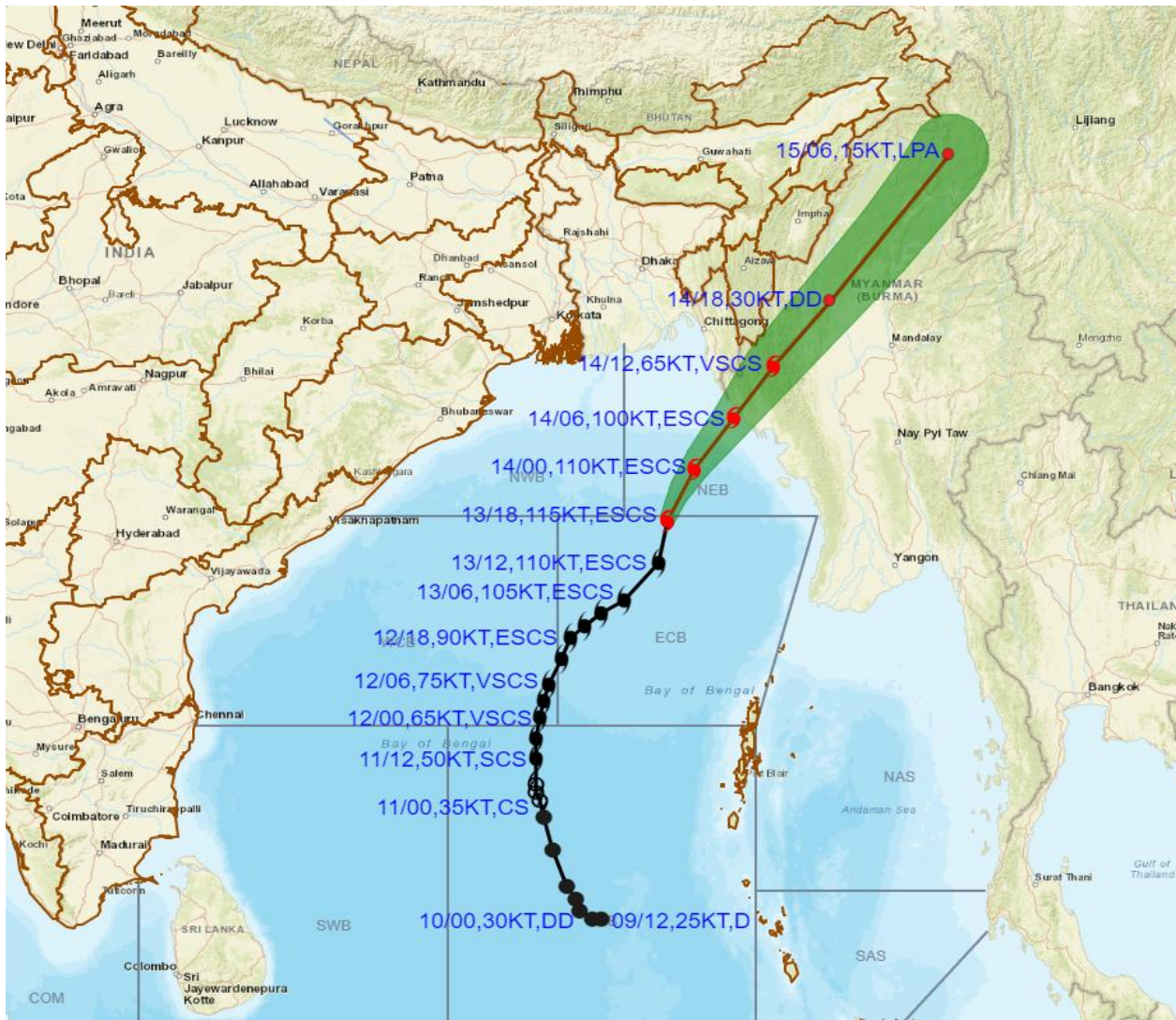
(ARULALAN. T)
SCIENTIST-C
RSMC NEW DELHI



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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 13TH 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 (\geq 120 KT)

● LESS THAN 34 KT

○ 34-47 KT

○ \geq 48 KT

— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY

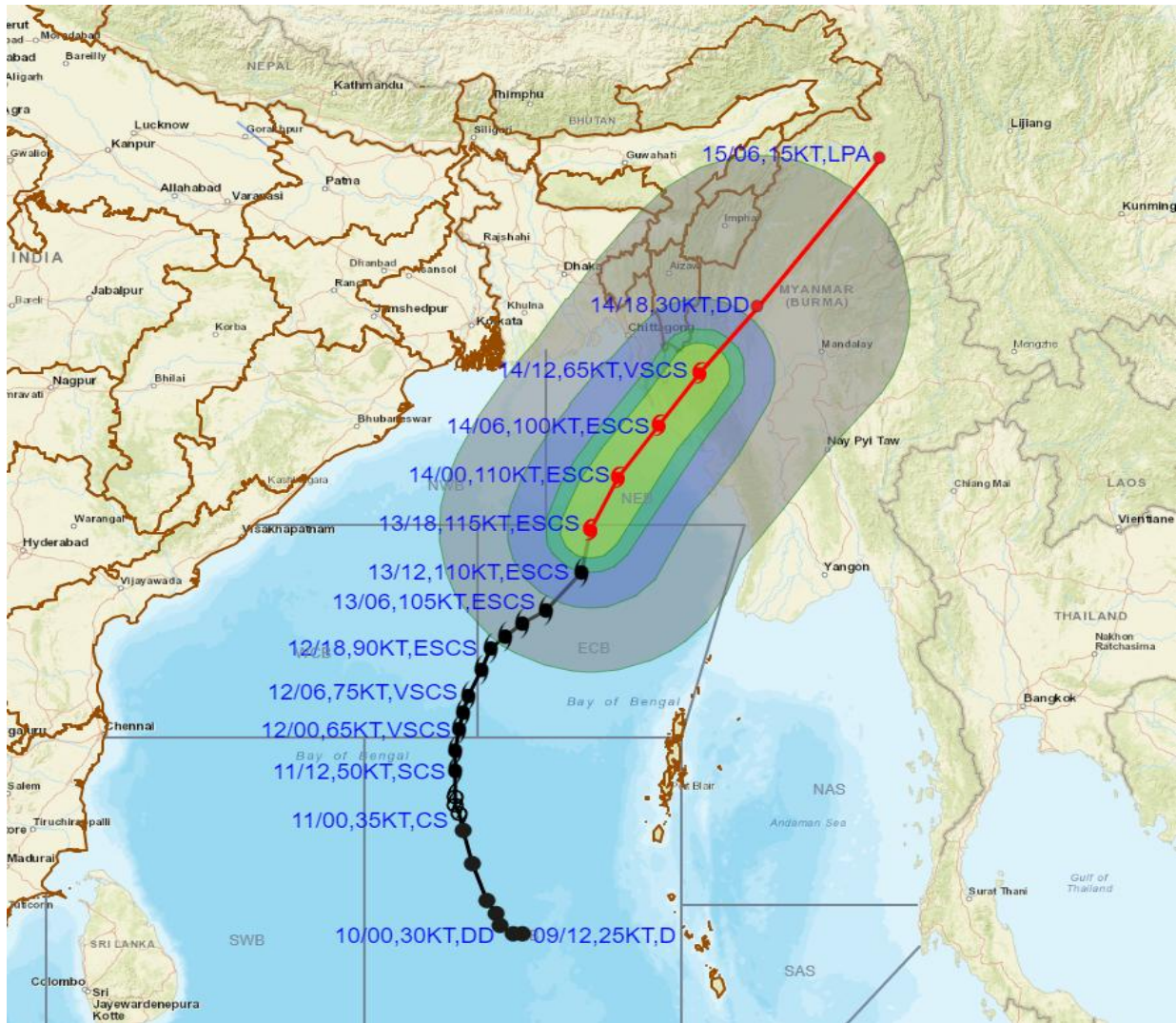
Forecast distance (km) and direction of the centre from nearest 5 coastal stations

Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
13.05.23/1800	0	17.9	91.0	MANAUNG (308,WSW)	KYAUKPYU (318,WSW)	SITTWE (318,SW)	TEKNAF (357,SSW)	SANDOWAY (360,W)
14.05.23/1800	24	23	94.7	KALEWA (47,ESE)	KALEMYO (69,ESE)	MAWLAIK (76,SSE)	FALAM (105,E)	GANGAW (110,NNE)

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OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 13TH MAY 2023.



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IST=UTC + 0530

L: LOW PRESSURE AREA

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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)

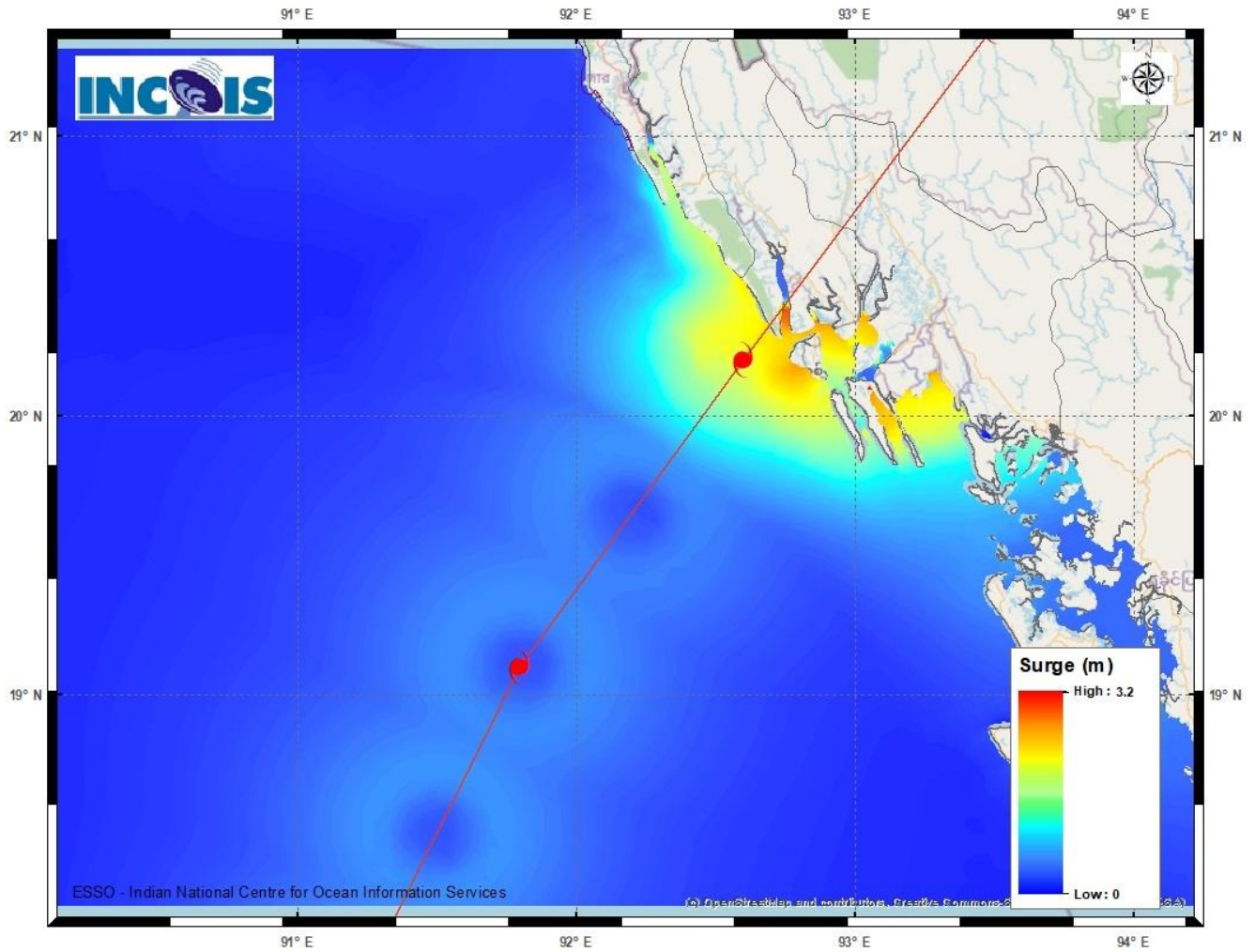
■ 50-63 KT (92-117 KMPH)

■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

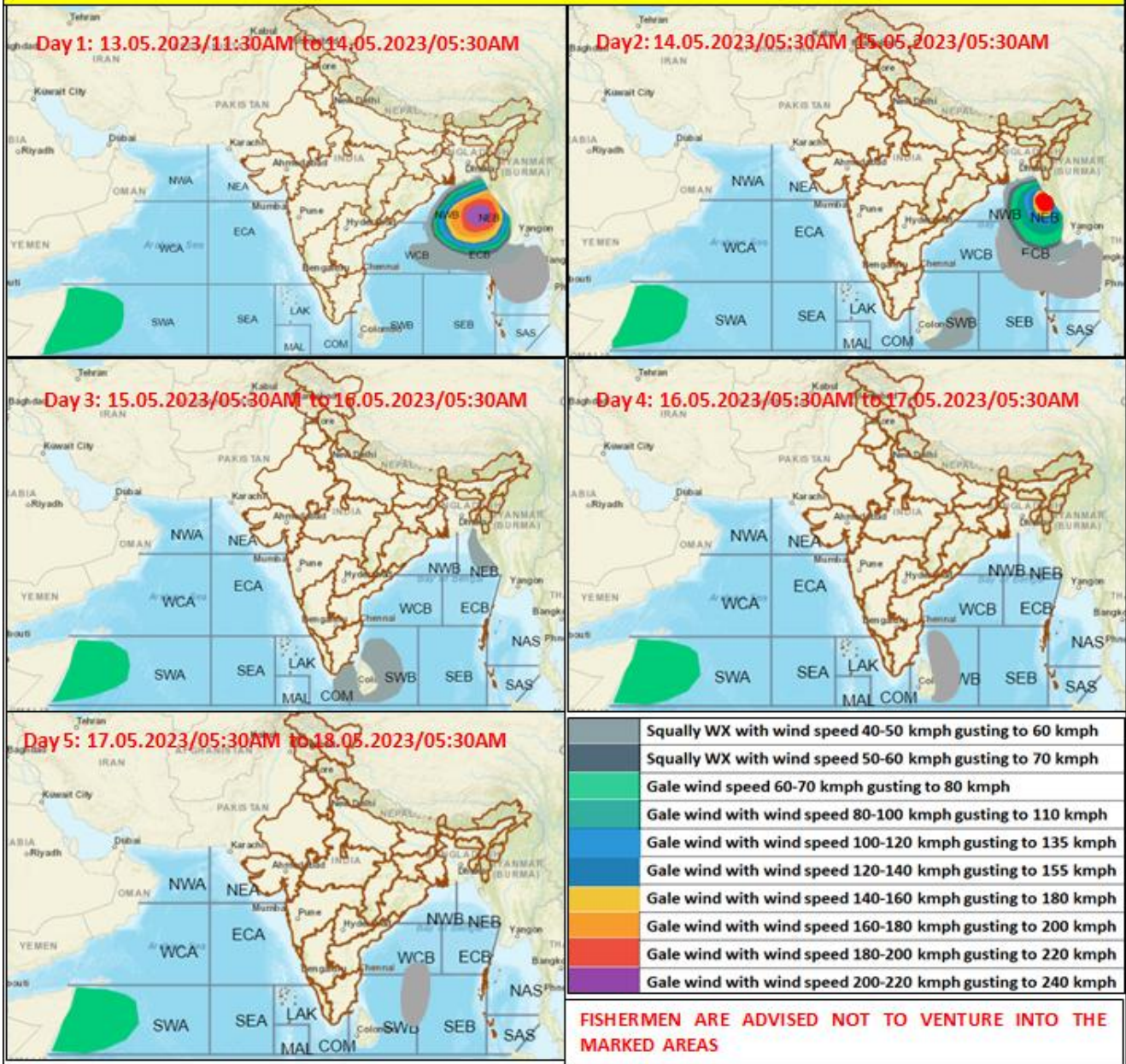
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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Fishermen warning graphics



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