REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY NO. 24

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. 24 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0045 UTC OF 14.05.2023 BASED ON 2100 UTC OF 13.05.2023

SUBJECT: EXTREMELY SEVERE CYCLONIC STROM "MOCHA" (PRONOUNCED AS "MOKHA") OVER EASTCENTRAL AND ADJOINING NORTHEAST 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 13TH MAY 2023 OVER EASTCENTRAL AND ADJOINING NORTHEAST BAY OF BENGAL REGION NEAR LATITUDE 18.3°N AND LONGITUDE 91.3°E, ABOUT 750 KM NORTH-NORTHWEST OF PORT BLAIR (INDIA, 43333), 350 KM SOUTH-SOUTHWEST OF COX'S BAZAR (BANGLADESH, 41992) AND 260 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. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
13.05.23/2100	18.3/91.3	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 120 KNOTS GUSTING TO 130 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 931 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 30 KM AND EYE TEMPERATURE MINUS 14 DEG CELSIUS. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH ADJOINING EAST CENTRAL BAY OF BENGAL BETWEEN LAT 15.0N TO 21.0N LONG 88.5E TO 94.0E AND NORTH MYANMAR COAST. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93 DEG CELSIUS.

AT 2100 UTC A BUOY (23092) NEAR 17.4°N/89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 993 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 320^0/27.2 KTS, ANOTHER BUOY (23093) NEAR 16.3°N/88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 999 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 20^0/19.4 KTS, AND ANOTHER BUOY (23459) NEAR 13.9°N/86.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 260^0/1.9 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/CM^2 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.

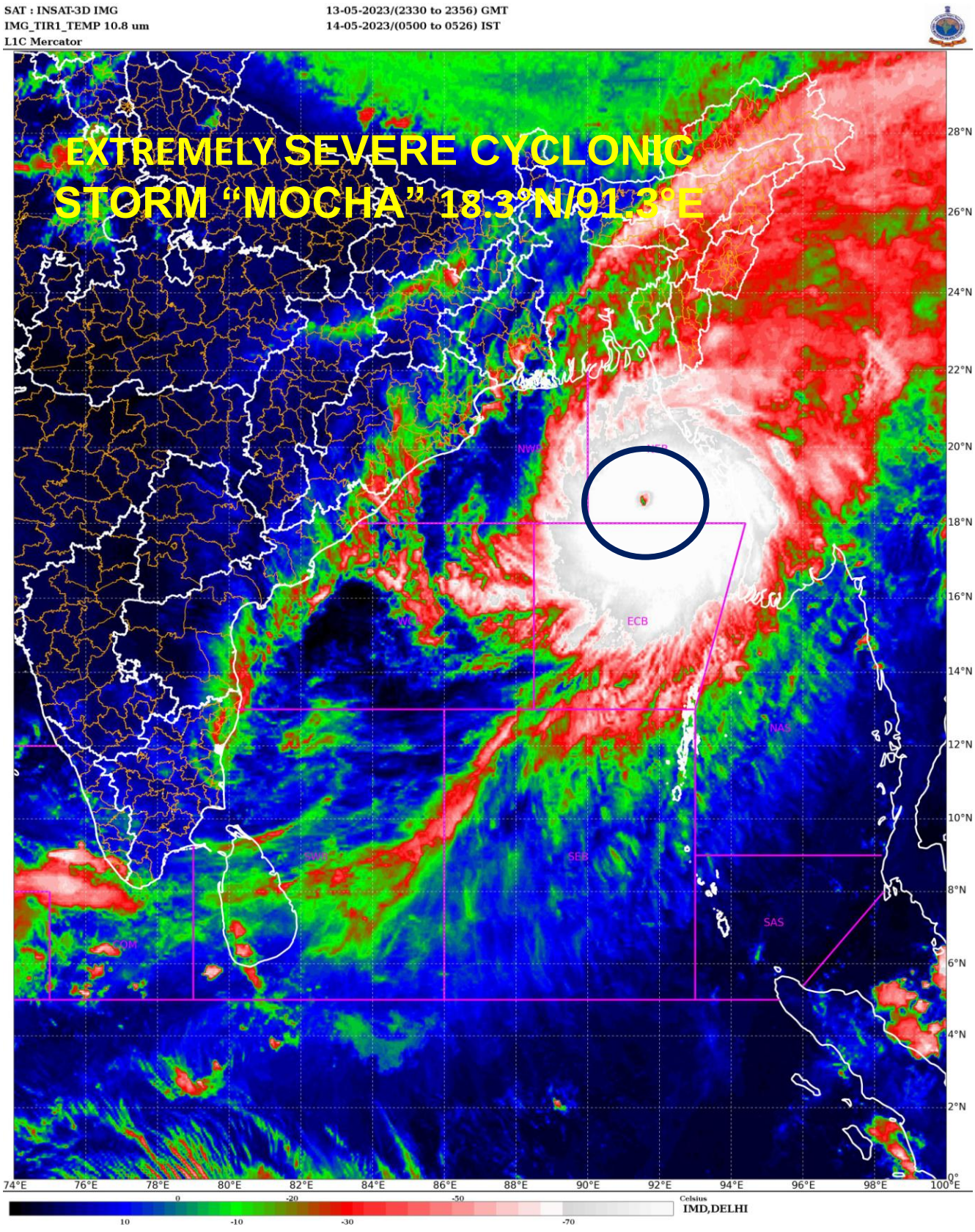
THE LOW LEVEL VORTICITY AT 850 HPA IS AROUND 300X10^{-6}S^{-1} AROUND SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVELS. LOW LEVEL CONVERGENCE HAS INCREASED SIGNIFICANTLY AND IS AROUND 50 X10^{-5} S$^{-1.}$ IT IS NORTHEAST-SOUTHWEST ORIENTED. SIMILAR TO UPPER LEVEL DIVERGENCE WHICH HAS ALSO INCREASED AND IS ABOUT 30X10^{-5}S^{-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 ENVIRONMETAL 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%
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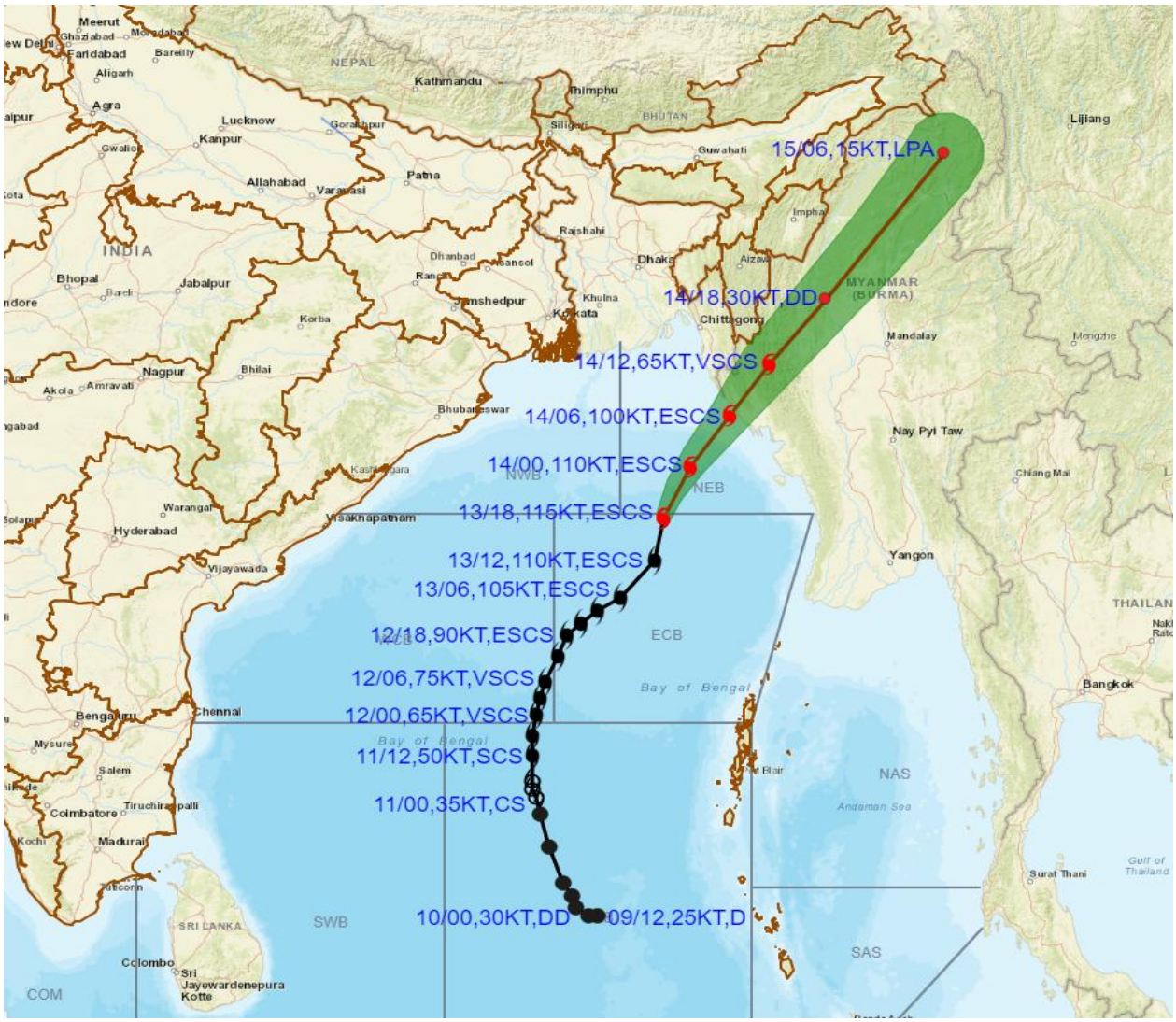
OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 13TH MAY 2023.



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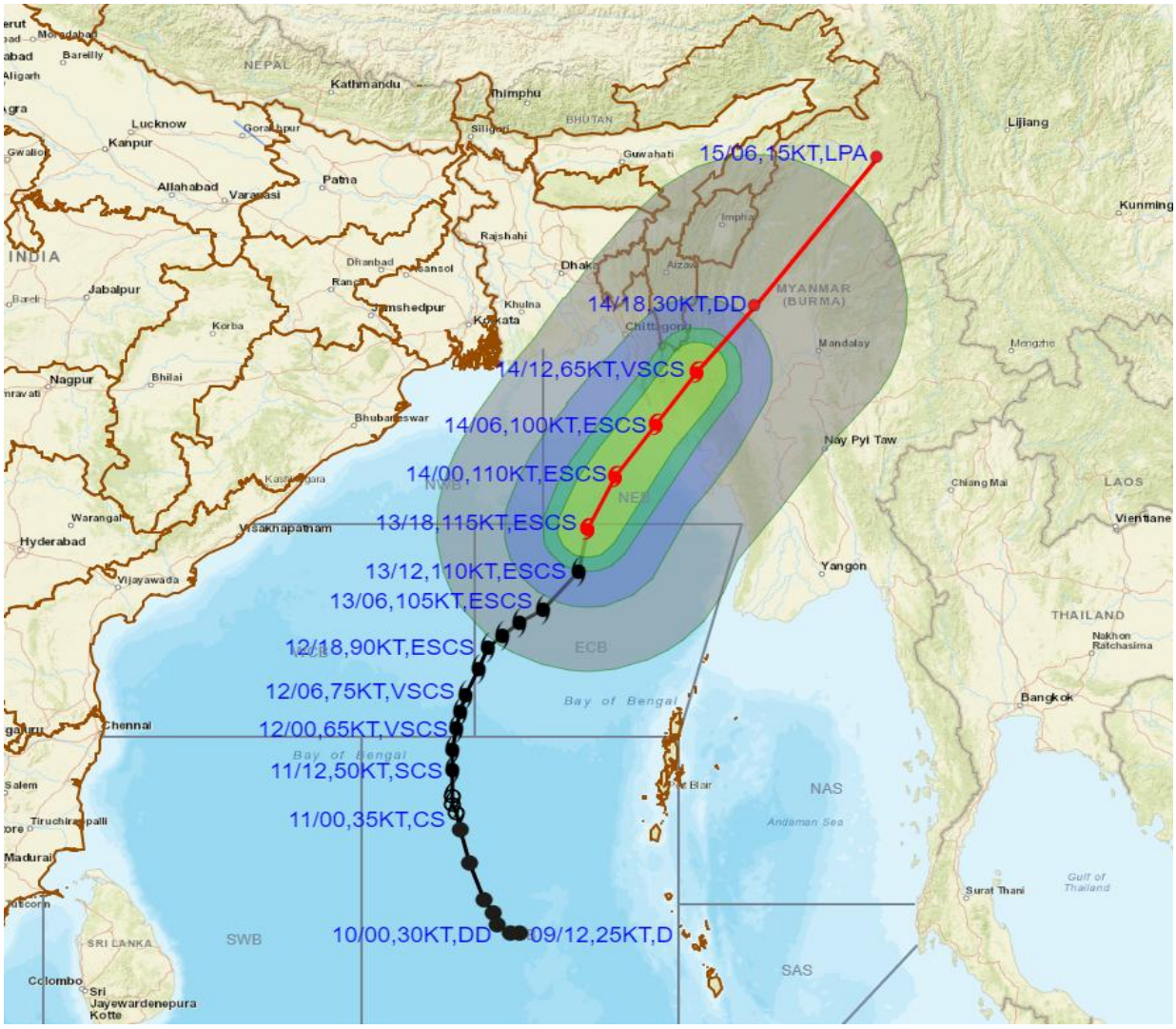
OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 1800 UTC (2330 IST) OF 13TH MAY 2023.



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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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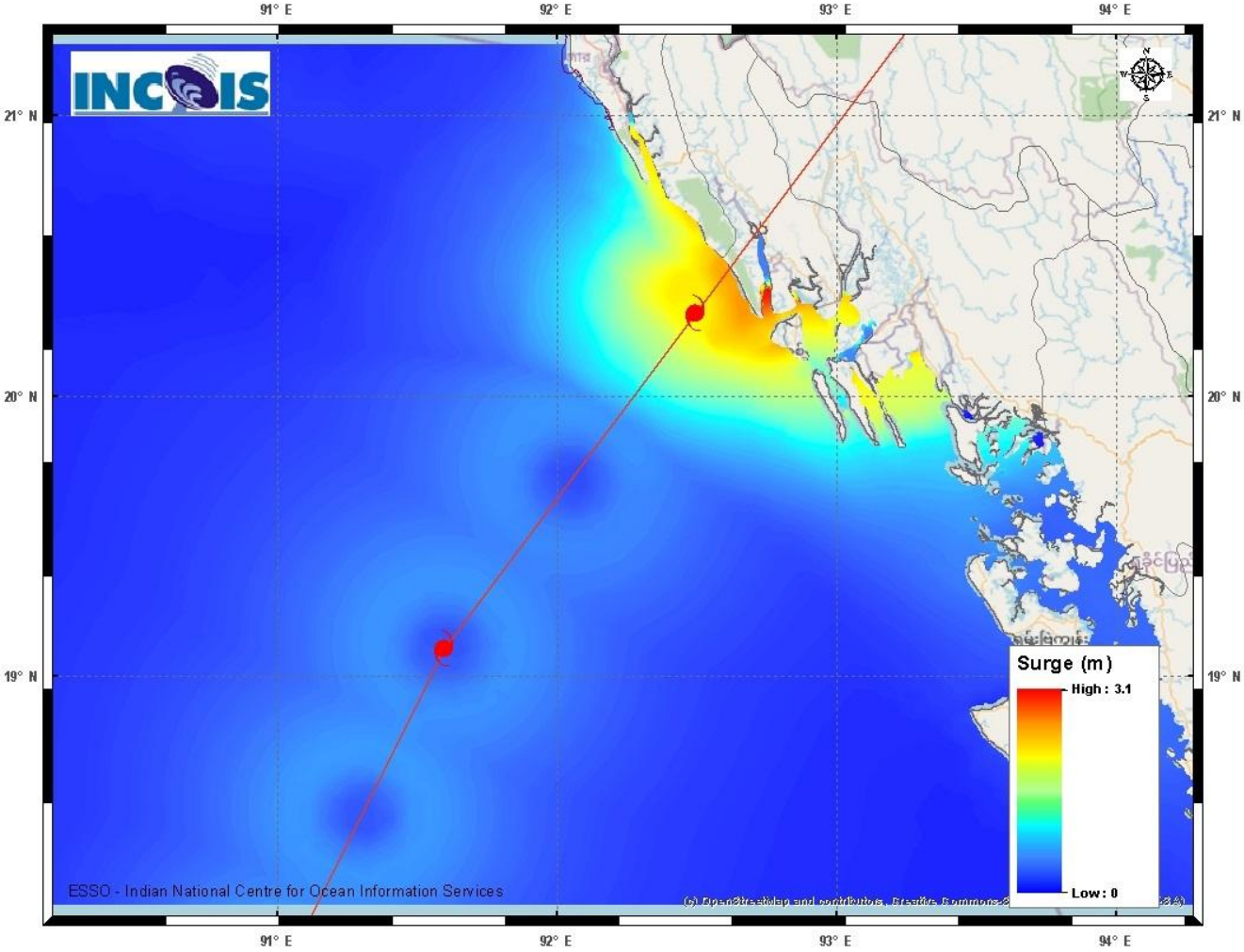
storm surge



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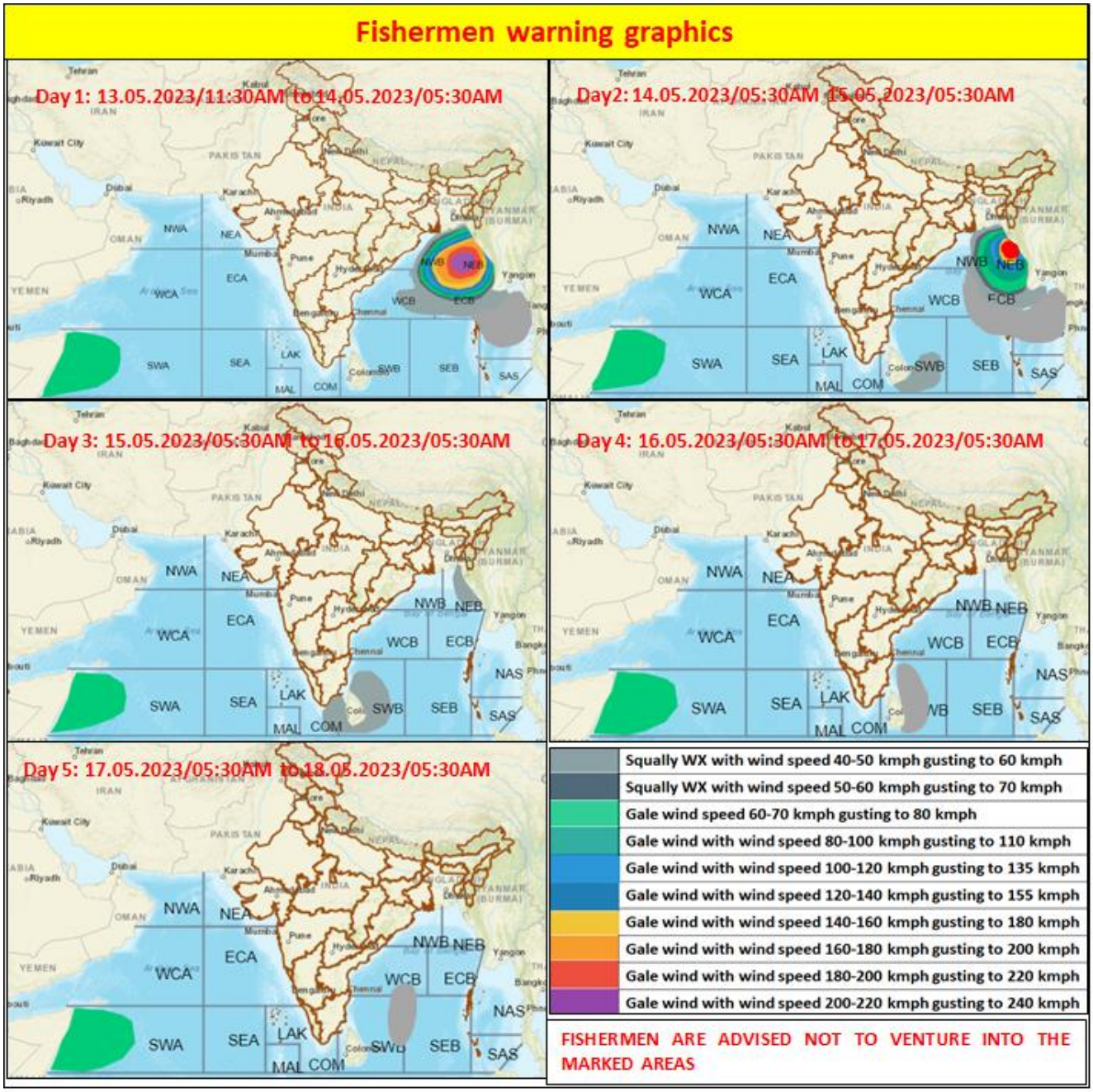
Fishermen warning graphics



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