



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 27

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 14.05.2023

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. 27 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 14.05.2023 BASED ON 0600 UTC OF 14.05.2023

SUBJECT: EXTREMELY SEVERE CYCLONIC STORM “MOCHA” IS MAKING LANDFALL OVER MYANMAR-BANGLADESH COASTS. LANDFALL PROCESS STARTED

THE **EXTREMELY SEVERE CYCLONIC STORM “MOCHA”** (PRONOUNCED AS **“MOKHA”**) OVER NORTHEAST AND ADJOINING EAST CENTRAL BAY OF BENGAL MOVED NEARLY NORTH-NORTHEASTWARDS WITH A SPEED OF 28 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 14TH MAY 2023 OVER NORTHEAST BAY OF BENGAL CLOSE TO NORTH MYANMAR & SOUTHEAST BANGLADESH COASTS NEAR LATITUDE 19.9°N AND LONGITUDE 92.5°E, ABOUT 40 KM SOUTHWEST OF SITTWE (MYANMAR, 48062) AND 170 KM SOUTH-SOUTHEAST OF COX’S BAZAR (BANGLADESH, 41992).

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) WITHIN A FEW HOURS AS AN EXTREMELY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 180-190 KMPH GUSTING TO 210 KMPH.

THE LANDFALL PROCESS HAS COMMENCED. THE HEAVY RAINFALL ALONG WITH THE GALE WIND IS OCCURRING OVER THE NORTH MYANMAR-BANGLADESH

COASTS AND FORWARD SECTOR OF THE EYE WALL IS ENTERING INTO THESE COASTAL AREAS.

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
14.05.23/0600	19.9/92.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
14.05.23/1200	21.1/93.5	130-140 gusting to 155	Very Severe Cyclonic Storm
14.05.23/1800	22.9/94.8	50-60 gusting to 70	Deep Depression
15.05.23/0000	24.5/96.1	40-50 gusting to 60	Depression

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 950HPA. SEA CONDITION IS PHENOMENAL OVER NORTHEAST AND ADJOINING 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 OF THE SYSTEM IS T 5.5/C.I.6.0. EYE PATTERN IS SEEN. SATELLITE IMAGERY IS INDICATING SLIGHT WEAKENING OF THE SYSTEM. EYE TEMPERATURE IS MINUS 57 DEG CELSIUS. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL BETWEEN LAT 16.0N TO 23.0N LONG 89.5E TO 97.0E, ARAKAN COAST AND SOUTHWEST MYANMAR COAST. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93 DEG CELSIUS.

AT 0600 UTC A BUOY (23092) NEAR 17.4°N/89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1000.9 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 320⁰/23.3 KTS. ANOTHER BUOY (23459) NEAR 13.9°N/86.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.7 HPA. BUOY (23093) NEAR 16.3°N/87.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.2 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 60⁰/17.5 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 THE SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVELS. LOW LEVEL

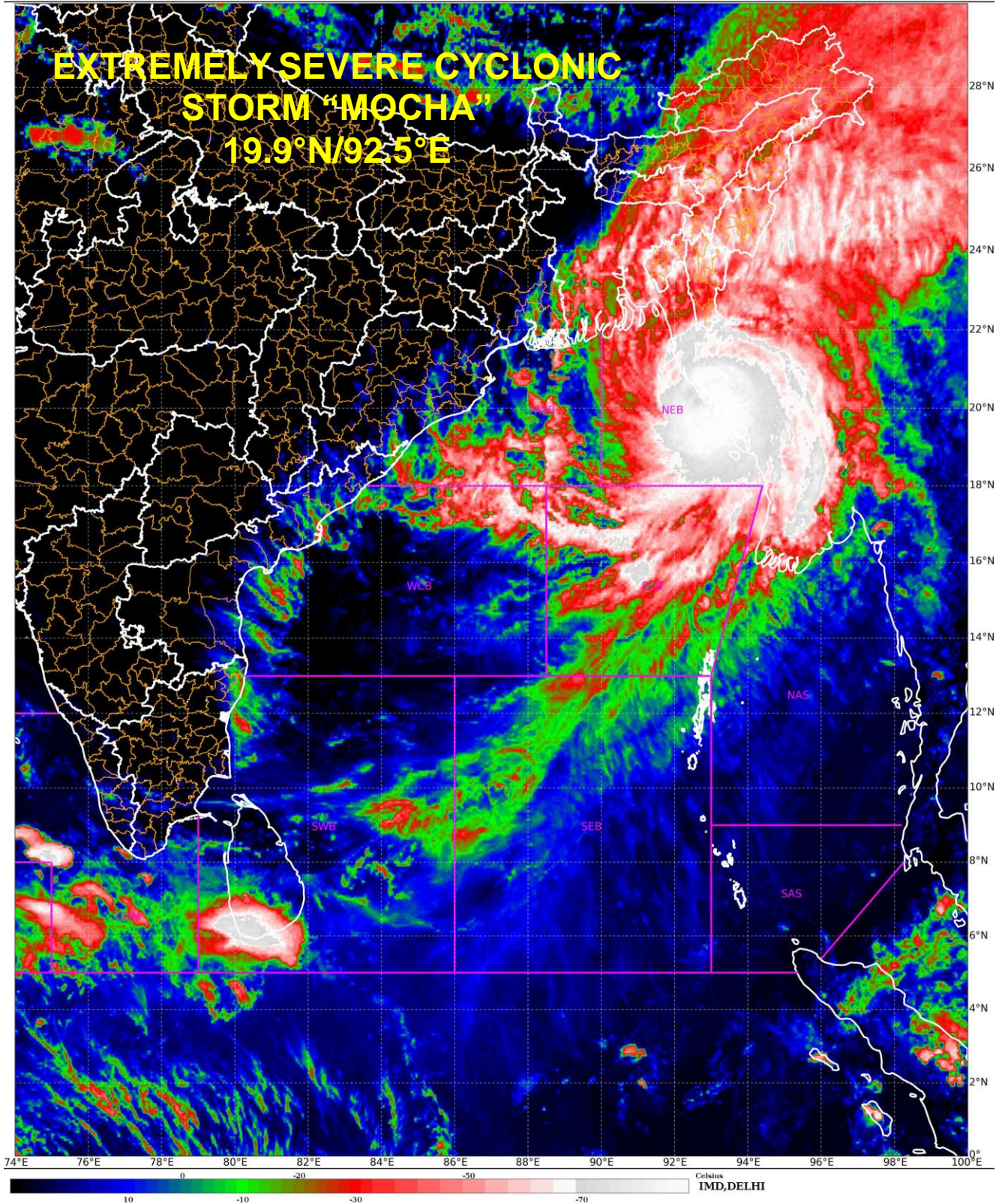
CONVERGENCE REMAINS AS AROUND $50 \times 10^{-5} \text{ S}^{-1}$ THE UPPER LEVEL DIVERGENCE IS AROUND $30 \times 10^{-5} \text{ S}^{-1}$ AND IT IS NORTHEASTWARDS ORIENTED. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-30 KNOTS) OVER SYSTEM AREA AND IS INCREASING TOWARDS BANGLADESH-MYANMAR COASTS. THE ENVIRONMENTAL CONDITIONS WITH POLEWARD OUTFLOW, WARM SST, HIGHER VALUES OF LOW LEVEL VORTICITY, CONVERGENCE AND DIVERGENCE ARE FAVOURING THE SYSTEM TO MAINTAIN ITS INTENSITY.

THERE IS AN ANTICYCLONIC CIRCULATION OVER NORTHWEST BAY OF BENGAL. 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.

DUE TO LAND INTERACTIONS AND HIGH WIND SHEAR, THE SYSTEM WILL FURTHER WEAKEN. RAPID WEAKENING WOULD OCCUR AFTER THE LANDFALL DUE TO RUGGED TERRAINS.

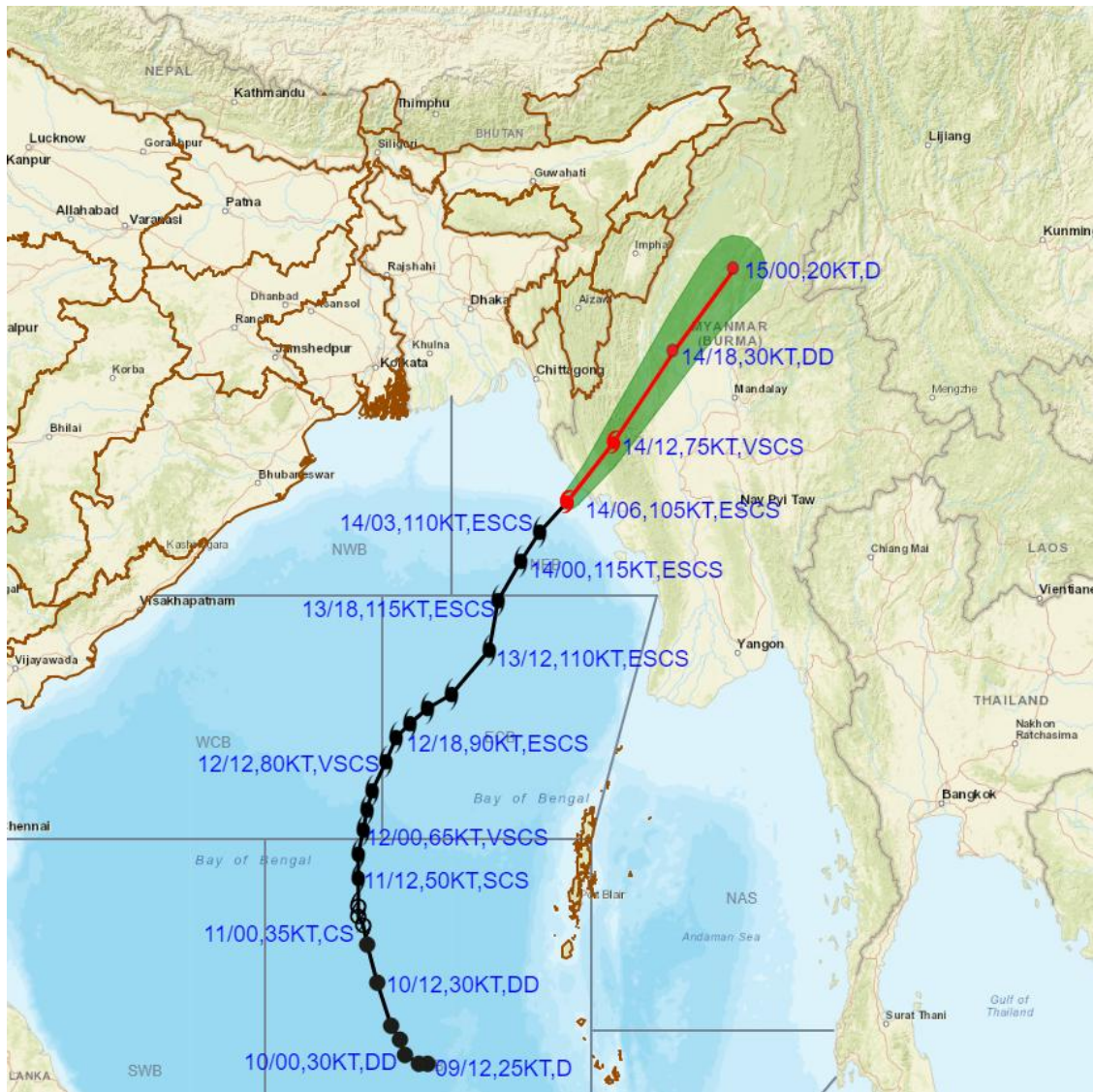
IN VIEW OF ALL THE ABOVE, THE EXTREMELY SEVERE CYCLONIC STORM "MOCHA" IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS SOUTHEAST BANGLADESH AND NORTH MYANMAR COASTS BETWEEN COX'S BAZAR (BANGLADESH, 41992) AND KYAUKPYU (MYANMAR, 48071), CLOSE TO SITTWE (MYANMAR, 48062) WITHIN A FEW HOURS AS AN EXTREMELY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

(M. SHARMA)
SCIENTIST-D
RSMC NEW DELHI





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER NORTHEAST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 14TH 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)

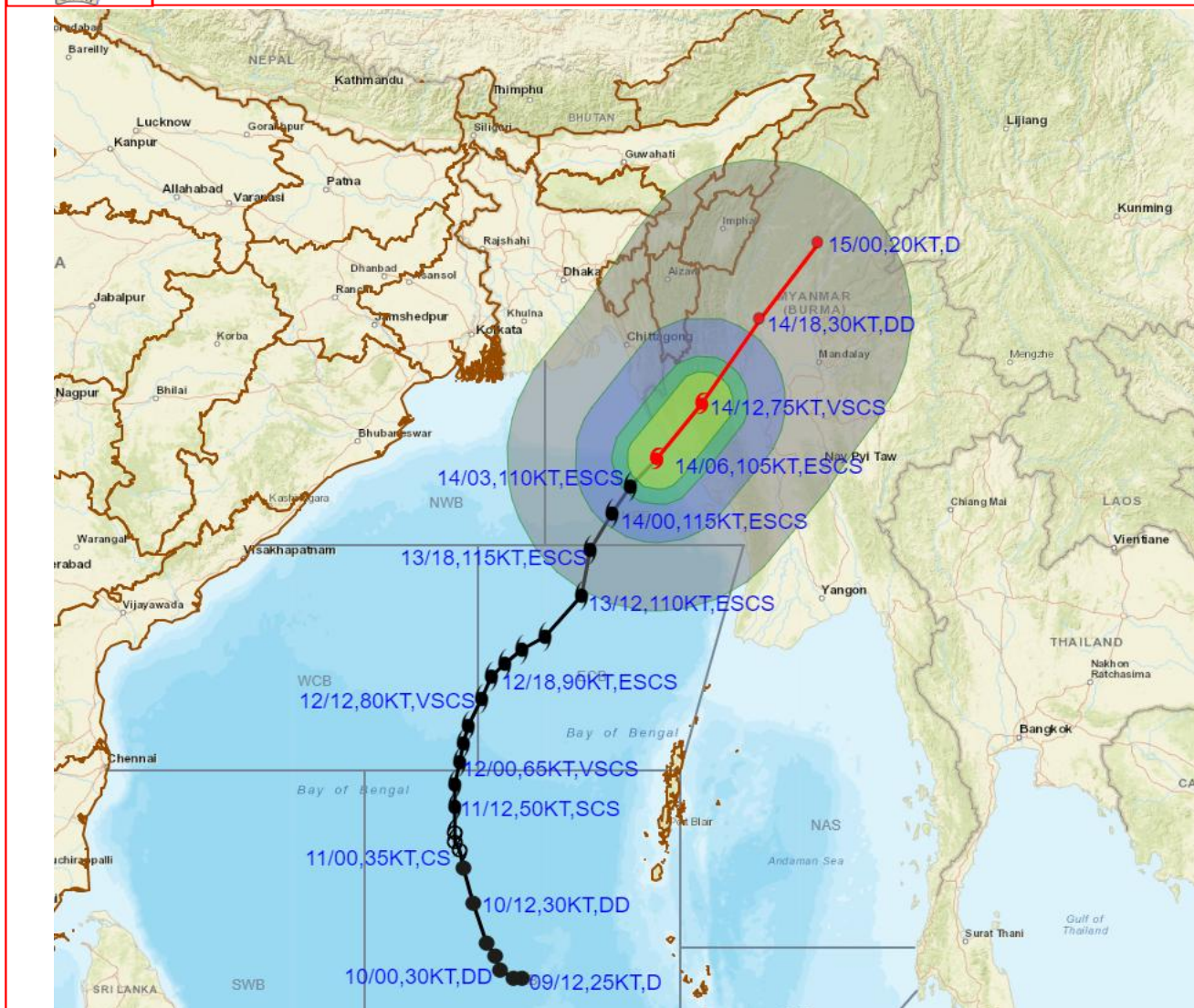
- LESS THAN 34 KT
- 34-47 KT
- \geq 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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
14.05.23/0600	0	19.9	92.5	SITTWE (48,WSW)	KYAUKTAW (107,S)	TEKNAF (110,S)	KYAUKPYU (123,WNW)	MANAUNG (174,NW)



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER NORTHEAST BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 14TH MAY 2023.



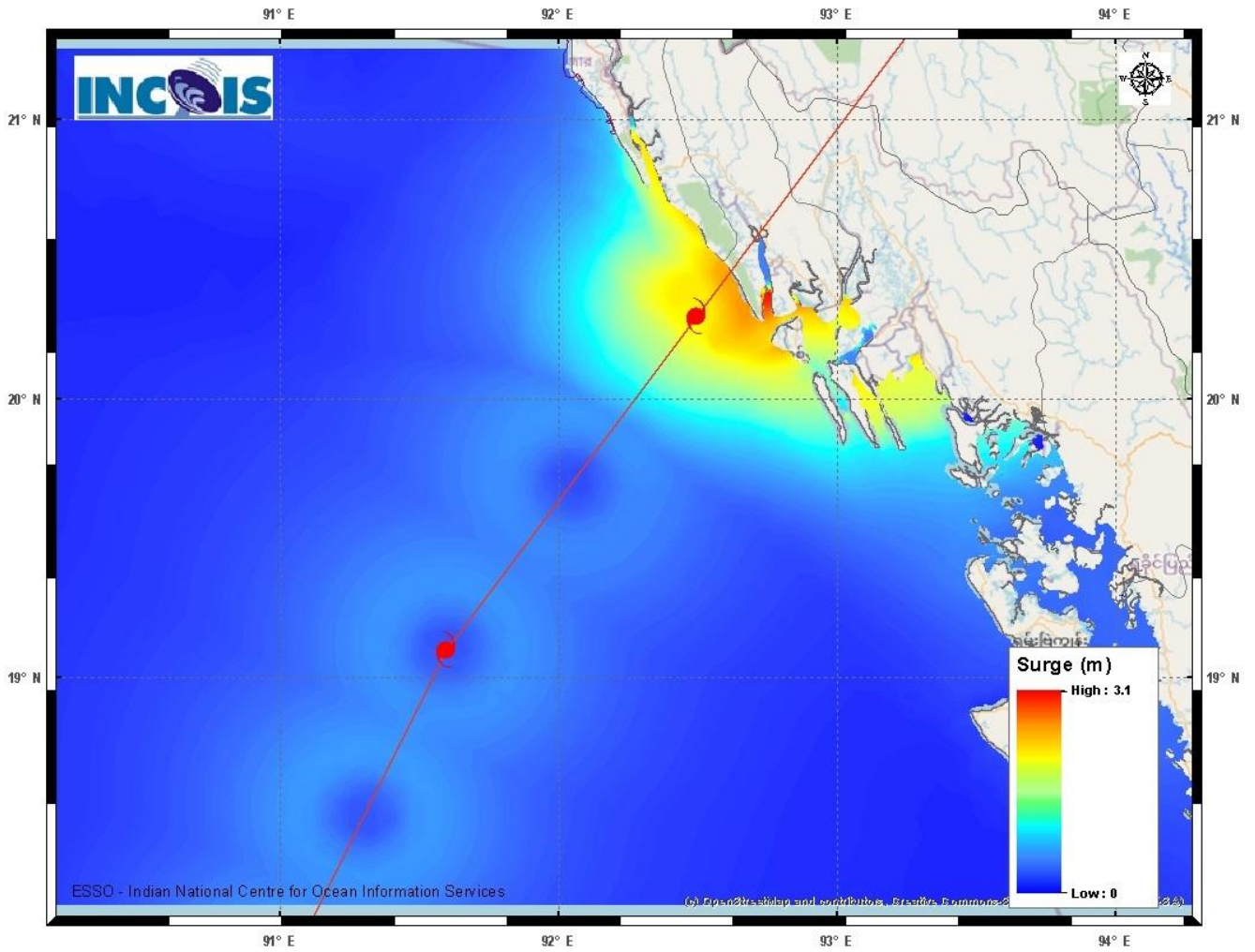
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

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

Storm surge



Fishermen warning graphics

