REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 22.10.2022

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 22.10.2022 BASED ON 1200 UTC OF 22.10.2022.

SUBJECT: DEPRESSION OVER EASTCENTRAL BAY OF BENGAL (PRE-CYCLONE WATCH: WEST BENGAL COAST)

THE DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 18 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1200 UTC OF TODAY, THE 22ND OCTOBER OVER EASTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.3^{0}N AND LONGITUDE 90.6^{0}E, ABOUT 370 KM NORTHWEST OF PORT BLAIR (43333), 860 KM SOUTH-SOUTHEAST OF SAGAR ISLAND (42903) AND 940 KM SOUTH OF BARISAL (41950, BANGLADESH).

IT IS VERY LIKELY TO MOVE NORTHWESTWARD AND INTENSIFY FURTHER INTO A DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BY 23RD OCTOBER MORNING. SUBSEQUENTLY, IT IS VERY LIKELY TO RECURVE GRADUALLY NORTH-NORTHEASTWARDS AND INTENSIFY INTO A CYCLONIC STORM OVER CENTRAL BAY OF BENGAL BY 24TH OCTOBER MORNING. THEREAFTER, IT WOULD CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP AROUND 25TH OCTOBER EARLY MORNING (0000 UTC).

FORECAST TRACK & INTENSITY IS GIVEN BELOW:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
22.10.22/1200	14.3/90.6	45-55 gusting to 65	Depression
23.10.22/0000	15.3/89.4	55-65 gusting to 75	Deep Depression
23.10.22/1200	16.9/88.2	65-75 gusting to 85	Cyclonic Storm
24.10.22/0000	18.5/88.5	80-90 gusting to 100	Cyclonic Storm
24.10.22/1200	20.5/89.5	85-95 gusting to 105	Severe Cyclonic Storm
25.10.22/0000	22.1/90.6	90-100 gusting to 110	Severe Cyclonic Storm
25.10.22/1200	24.0/91.8	50-60 gusting to 70	Deep Depression

INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 1.5. CONVECTION HAS INCREASED DURING LAST SIX HOURS. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL & ADJOINING WESTCENTRAL BAY OF BENGAL, NORTH ANDAMAN SEA AND ANDAMAN ISLANDS. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUS. CLOUDS ARE GRADUALLY ORGANISING AROUND THE CENTRE. AS PER MULTISATELLITE BASED WINDS, STRONGER WINDS ARE SEEN IN THE NORTHEAST SECTOR.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS ABOUT 25 KNOTS GUSTING TO 35 KNOTS AROUND SYSTEM AREA. ESTIMATED CENTRAL PRESSURE IS 1007 HPA. SEA CONDITION IS LIKELY TO BE ROUGH OVER SOUTHEAST BAY OF BENGAL & ADJOINING EASTCENTRAL AND NORTH ANDAMAN SEA.

REMARKS:

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WOULD CONTINUE IN SAME PHASE DURING NEXT 5 DAYS WITH GRADUALLY INCREASING AMPLITUDE. HENCE MJO IS NOT SUPPORTIVE FOR ENHANCEMENT OF CONVECTIVE AVTIVITY OVER THE BAY OF BENGAL OF BENGAL.

SEA SURFACE TEMPERATURE (SST) IS AROUND 29-31^{0}C OVER ENTIRE BOB. THE OCEAN HEAT CONTENT (OHC) IS >100 KJ/CM^2 OVER ENTIRE ANDAMAN SEA, CENTRAL BOB AND SOUTH BOB AND 50-70 KJ/CM^2 OVER WESTERN PARTS OF BOB.

LOW LEVEL VORTICITY IS ABOUT 100 X10^{-6} S^{-1} AROUND SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS AROUND 10 X10^{-5} S^{-1} TO THE NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS AROUND 40 X10^{-5} S^{-1} TO THE NORTHEAST OF SYSTEM CENTRE. STRONG EQUATORWARD OUTFLOW IS ALSO SEEN IN UPPER LEVELS. WIND SHEAR IS MODERATE (10-15 KNOTS) OVER SOUTHEAST BAY OF BENGAL AND ANDAMAN SEA AND IS HIGH TO THE NORTH OF 15°N. CURRENTLY, THE SYSTEM IS IN A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION. UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 18°N OVER BAY OF BENGAL. A TROUGH IN MID-LATITUDE WESTERLIES ROUGHLY RUNNING ALONG 79°E UPTO 18°N. THE SYSTEM IS CURRENTLY TRACKING NORTHWARDS ALONG THE PERIPHERY OF RIDGE AND FROM 24TH ONWARDS WOULD BE SHEARED NORTHEASTWARDS UNDER THE INFLUENCE OF TROUGH IN WESTERLIES..

MOST OF THE MODELS ARE INDICATING LIKELY FORMATION OF CYCLONIC STORM ON 24TH OVER WESTCENTRAL & ADJOINING EASTCENTRAL BOB. THE MODELS ARE ALSO INDICATING GRADUAL NORTHEASTWARDS RECURVATURE OF THE SYSTEM FROM 23RD EVENING & INTENSIFICATION INTO A CYCLONIC STORM. MODELS ARE FURTHER INDICATING THE SYSTEM TO CROSS BANGLADESH COAST AROUND 25/0000 UTC BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP AROUND 25TH OCTOBER EARLY MORNING.

IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE DEPRESSION OVER EASTCENTRAL BAY OF BENGAL IS VERY LIKELY TO MOVE NORTHWESTWARD AND INTENSIFY FURTHER INTO A DEEP DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BY 23RD OCTOBER MORNING. SUBSEQUENTLY, IT IS VERY LIKELY TO RECURVE GRADUALLY NORTH-NORTHEASTWARDS AND INTENSIFY INTO A CYCLONIC STORM OVER CENTRAL BAY OF BENGAL BY 24TH OCTOBER MORNING. THEREAFTER, IT WOULD CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP AROUND 25TH OCTOBER EARLY MORNING (0000 UTC).

(M. SHARMA)
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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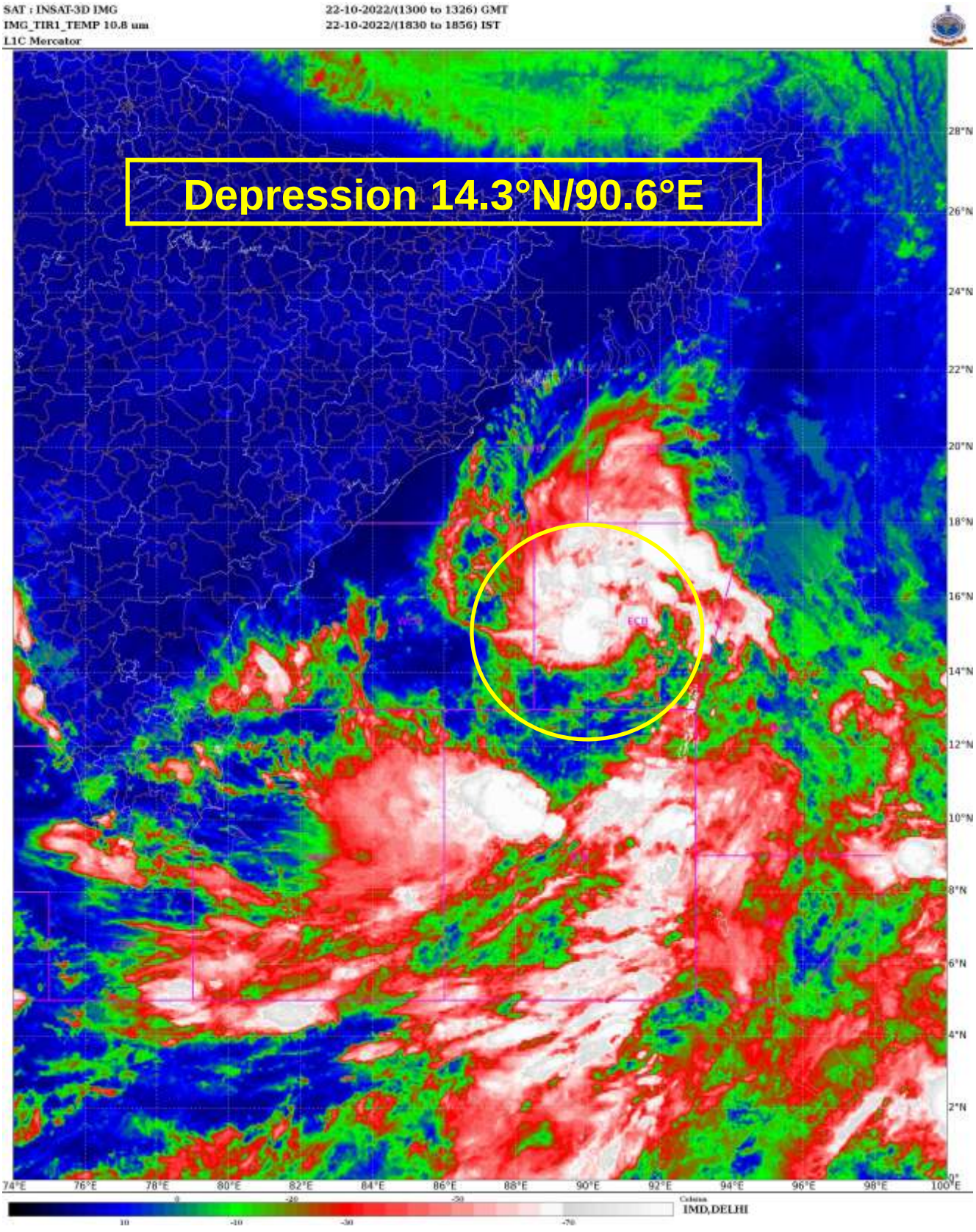

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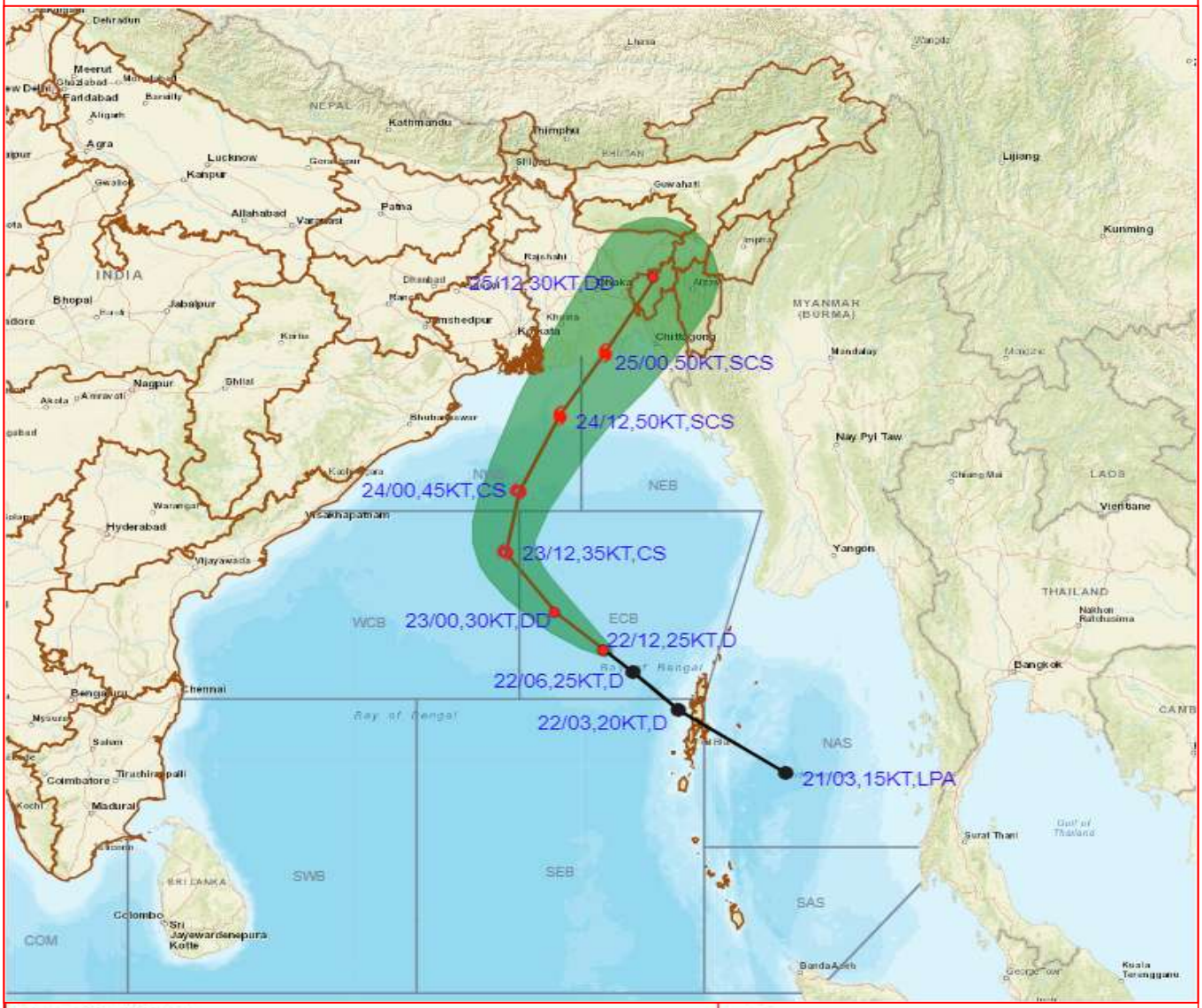

DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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

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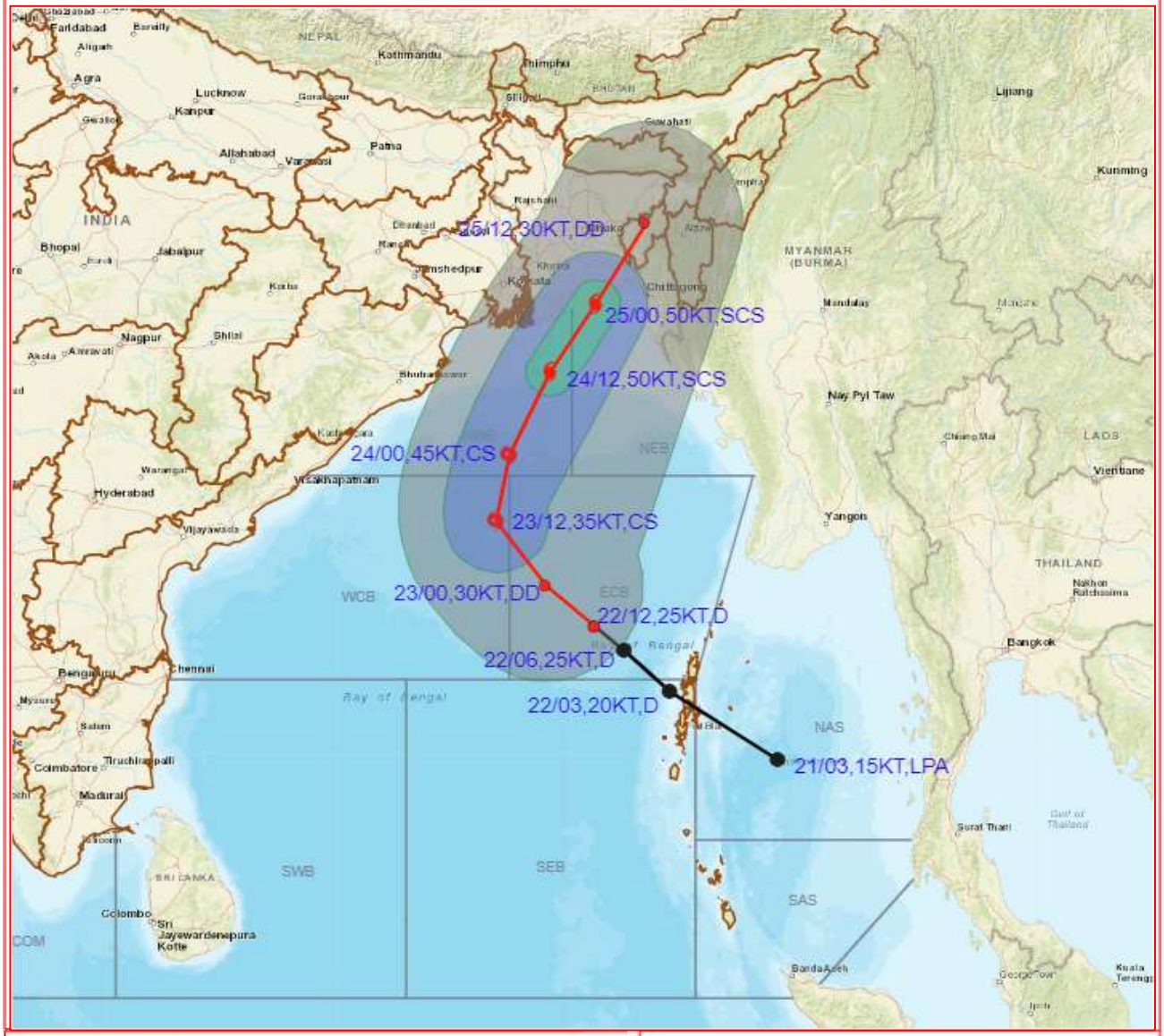

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- 34-47 KT
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- OBSERVED TRACK
- FORECAST TRACK
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AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (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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