REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.10.2022

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0700 UTC OF 21.10.2022 BASED ON 0300 UTC OF 21.10.2022.

BAY OF BENGAL:

SUBJECT: LOW PRESSURE AREA OVER NORTH ANDAMAN SEA AND ADJOINING AREAS & IT'S LIKELY INTENSIFICATION INTO A CYCLONIC STORM

YESTERDAY'S LOW PRESSURE AREA OVER NORTH ANDAMAN SEA AND ADJOINING AREAS OF SOUTH ANDAMAN SEA & SOUTHEAST BAY OF BENGAL PERSISTED OVER THE SAME REGION IN THE MORNING OF TODAY, THE 21ST OCTOBER, 2022.

IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION OVER SOUTHEAST & ADJOINING EASTCENTRAL BAY OF BENGAL ON 22ND OCTOBER AND THEN MOVING NORTHWESTWARDS INTENSIFY FURTHER INTO A DEEP DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST BAY OF BENGAL ON 23RD OCTOBER. SUBSEQUENTLY, IT IS VERY LIKELY TO RECURVE GRADUALLY NORTHWARDS AND INTENSIFY INTO A CYCLONIC STORM OVER WESTCENTRAL AND ADJOINING EASTCENTRAL BAY OF BENGAL BY 24TH OCTOBER. THEREAFTER, IT IS LIKELY TO MOVE NORTH-NORTHEASTWARDS AND REACH NEAR WEST BENGAL - BANGLADESH COASTS ON 25TH OCTOBER, SKIRTING ODISHA COAST.

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
22.10.22/0000	12.0/91.5	40-50 gusting to 65	Depression
22.10.22/1200	13.0/90.0	45-55 gusting to 65	Depression
23.10.22/0000	14.2/88.4	50-60 gusting to 70	Deep Depression
23.10.22/1200	15.2/87.5	55-65 gusting to 75	Deep Depression
24.10.22/0000	16.2/87.2	65-75 gusting to 85	Cyclonic Storm
24.10.22/1200	17.2/87.5	70-80 gusting to 100	Cyclonic Storm
25.10.22/0000	18.9/88.3	80-90 gusting to 100	Cyclonic Storm
25.10.22/1200	20.8/89.2	90-100 gusting to 110	Severe Cyclonic Storm
26.10.22/0000	22.5/90.0	85-95 gusting to 105	Severe Cyclonic Storm

IN ASSSOCIATION WITH THE SYSTEM, ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ANDAMAN SEA AND ADJOINING BAY OF BENGAL. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUS. CLOUDS ARE GRADUALLY ORGANISING AROUND THE CENTRE.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL AND ANDAMAN SEA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS ABOUT 15 KNOTS GUSTING TO 25 KNOTS AROUND SYSTEM AREA. LONG ISLAND (43310) REPORTED MEAN SEA LEVEL PRESSURE OF 1009.6 HPA AT 0300 UTC WITH A DEPARTURE. SEA CONDITION IS LIKELY TO BE ROUGH OVER SOUTHEAST BAY OF BENGAL & ADJOINING EASTCENTRAL AND NORTH ANDAMAN SEA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
LOW	HIGH	HIGH	HIGH	HIGH

ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER EASTCENTRAL & SOUTHEAST ARABIAN SEA, LAKSHADWEEP ISLANDS AREA AND COMORIN AREA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	NIL	NIL	NIL

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 HAS INCREASED AND IS AROUND 20 X10^{-5} S^{-1} TO THE SOUTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS AROUND 20 X10^{-5} S^{-1} OVER ANDAMAN SEA TO THE SOUTHEAST OF SYSTEM CENTRE. WIND SHEAR IS MODERATE (10-15 KNOTS) OVER ANDAMAN SEA AND IS HIGH TO THE NORTH OF 18°N. CURRENTLY, THE LOW PRESSURE AREA OVER NORTH ANDAMAN SEA IS IN A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION AND INITIAL WEST-NORTHWESTWARD MOVEMENT. UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 20°N OVER BAY OF BENGAL. A TROUGH IN MID-LATITUDE WESTERLIES ROUGHLY RUNNING ALONG 75°E UPTO 20°N WOULD TEND TO RECURVE THE SYSTEM NORTH-NORTHEASTWARDS.

MOST OF THE MODELS ARE INDICATING LIKELY DEVELOPMENT OF DEVELOPMENT OF DEPRESSION ON 22ND OVER SOUTHEAST & ADJOINING EASTCENTRAL BOB AND INTENSIFICATION INTO A CYCLONIC STORM ON 24TH OVER WESTCENTRAL & ADJOINING EASTCENTRAL BOB . THE MODELS ARE ALSO INDICATING GRADUAL NORTHEASTWARDS RECURVATURE OF THE SYSTEM FROM 24TH ONWARDS AND MOVEMENT OF SYSTEM TOWARDS WEST BENGAL-BANGLADESH COASTS THEREAFTER.

IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE LOW PRESSURE AREA OVER NORTH ANDAMAN SEA & NEIGHBOURHOOD IS LIKELY TO IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION OVER SOUTHEAST & ADJOINING EASTCENTRAL BAY OF BENGAL ON 22ND OCTOBER AND THEN MOVING NORTHWESTWARDS INTENSIFY FURTHER INTO A DEEP DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST BAY OF BENGAL ON 23RD OCTOBER. SUBSEQUENTLY, IT IS

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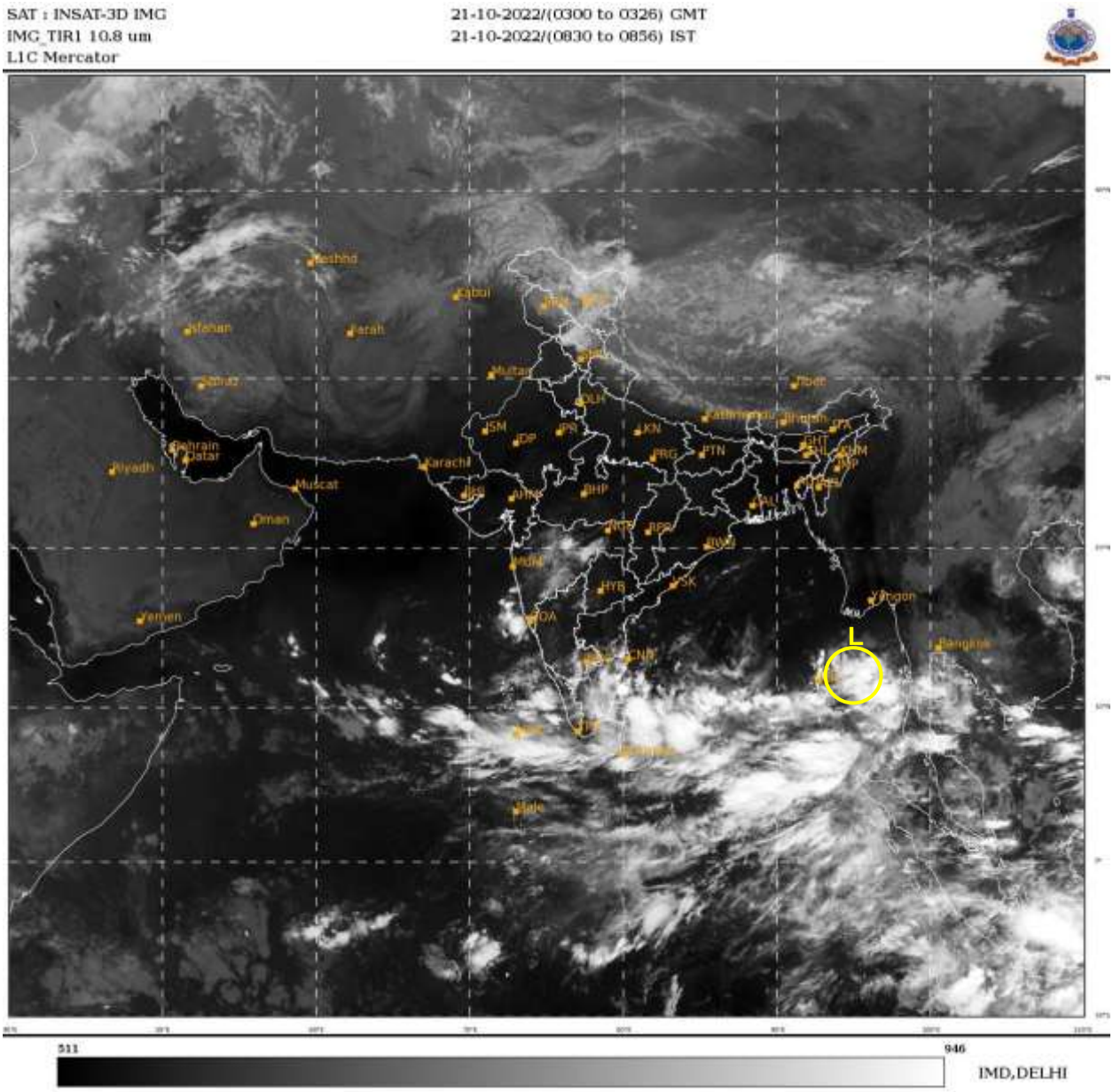
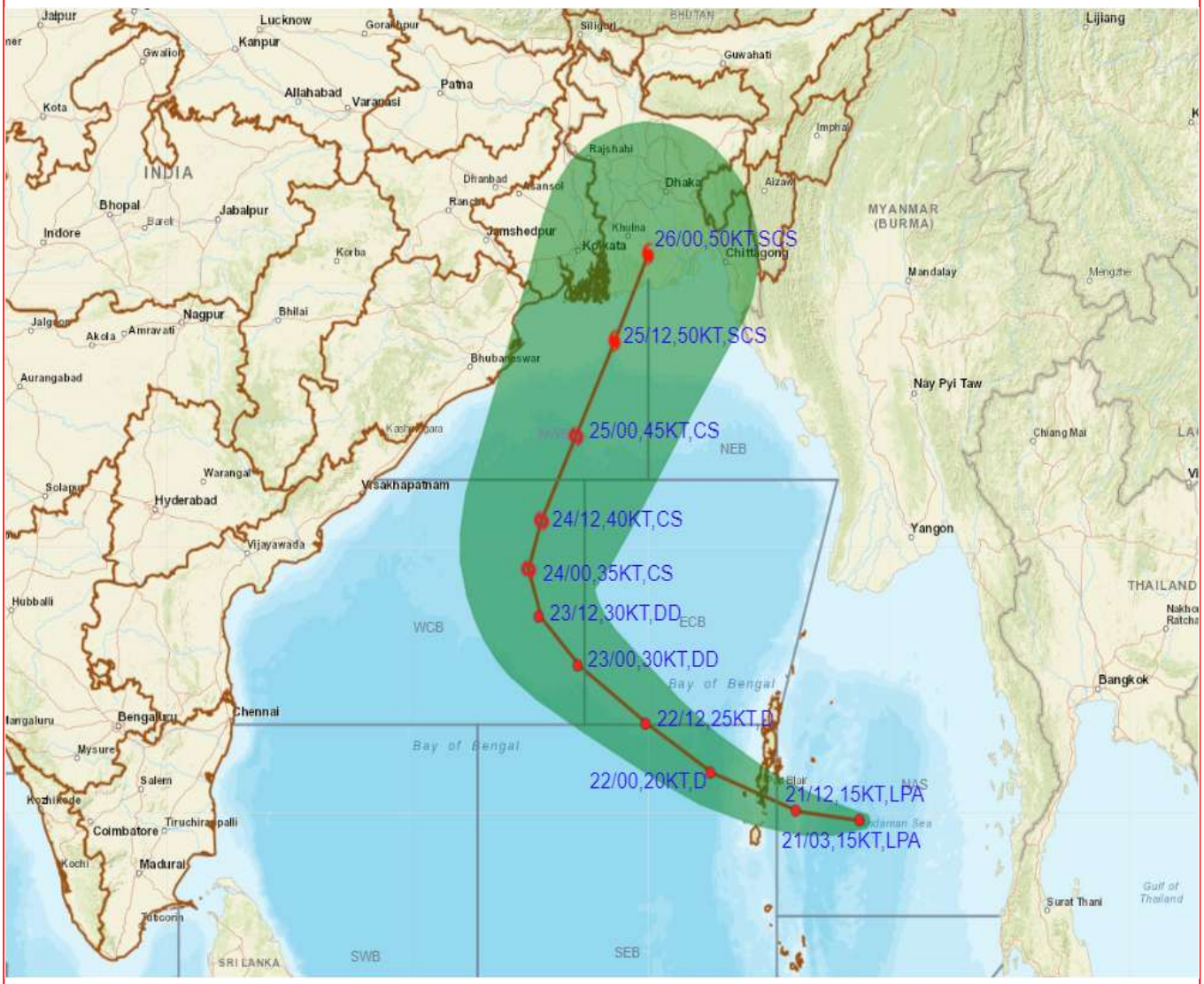


L: LOW PRESSURE AREA

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 LOW PRESSURE AREA OVER NORTH ANDAMAN SEA BASED ON 0300 UTC OF 21ST OCTOBER, 2022



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

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
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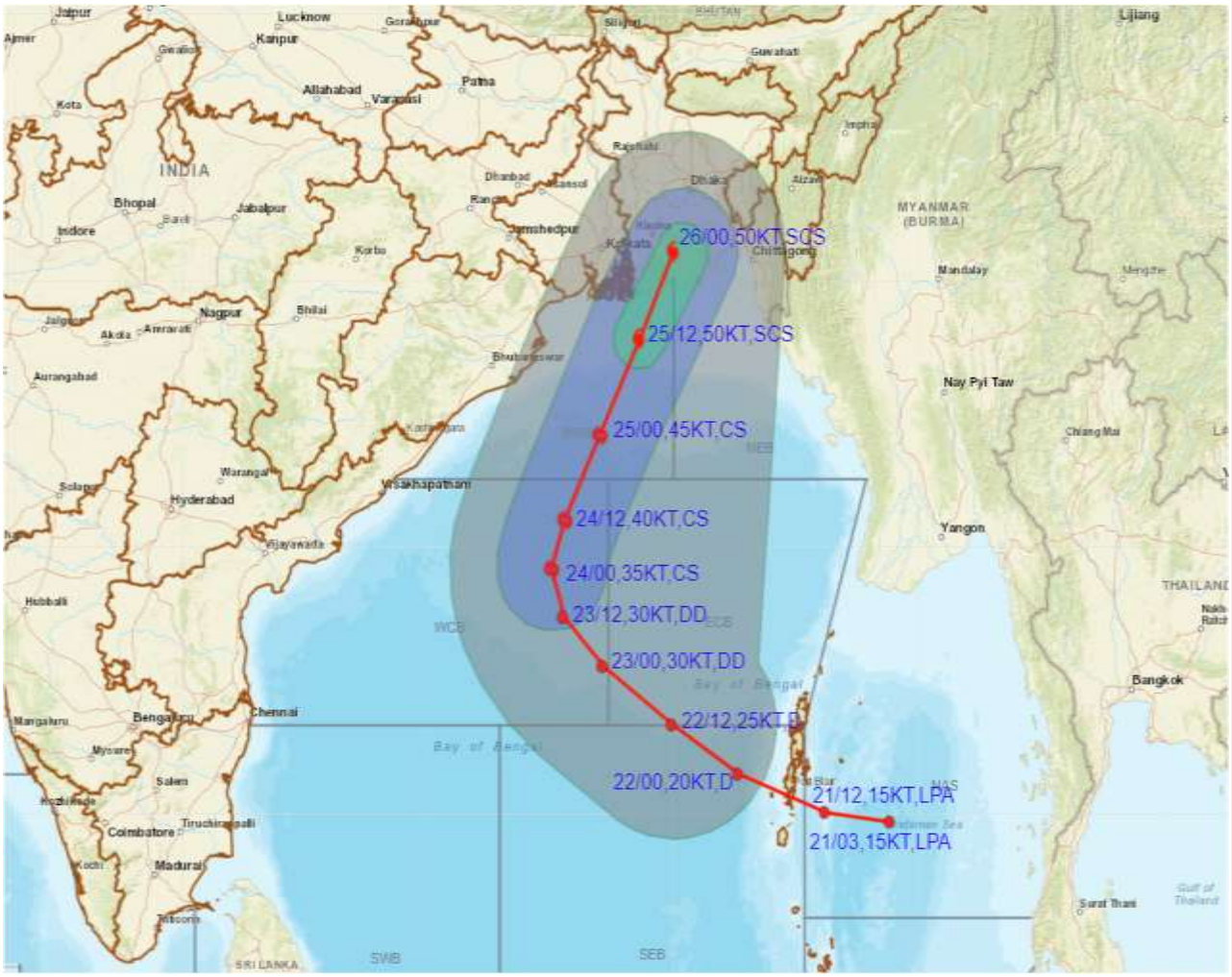
OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF LOW PRESSURE AREA OVER NORTH ANDAMAN SEA BASED ON 0300 UTC OF 21ST OCTOBER, 2022



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IST=UTC + 0530
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D: DEPRESSION (17-27 KT)
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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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