



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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 18.03.2022

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 18.03.2022 BASED ON 0300 UTC OF 18.03.2022.

BAY OF BENGAL:

THE LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL MOVED EAST-NORTHEASTWARDS AND LAY CENTRED AT 0300 UTC OF TODAY THE 18TH MARCH OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EAST EQUATORIAL INDIAN OCEAN.

IT IS LIKELY TO CONTINUE TO MOVE EAST-NORTHEASTWARDS, BECOME A WELL MARKED LOW PRESSURE AREA AND LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA AROUND 0000 UTC OF 19TH MARCH. THEREAFTER, IT IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN & NICOBAR ISLANDS, INTENSIFY INTO A DEPRESSION BY 0000 UTC OF 20TH MARCH AND INTO A CYCLONIC STORM ON 21ST MARCH. THEREAFTER, IT IS LIKELY TO MOVE NEARLY NORTH-NORTHEASTWARDS AND REACH NEAR BANGLADESH-NORTH MYANMAR COASTS AROUND 0000 UTC OF 22ND MARCH, 2022.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA BETWEEN LATITUDE 5.0N & 10.0N AND LONGITUDE 88.0E & 95.0E IN ASSOCIATION WITH LOW PRESSURE AREA OVER THE REGION. MINIMUM CLOUD TOP TEMPERATURE IS - 84°C.

ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 10-20 KNOTS GUSTING TO 30 KNOTS AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS AROUND 1004 HPA. SEA CONDITION IS MODERATE TO ROUGH AND IS VERY LIKELY TO BECOME ROUGH TO VERY ROUGH FROM 19TH MARCH ONWARDS OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA AND EAST EQUATORIAL INDIAN OCEAN.

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	MODERATE	HIGH	HIGH	HIGH

ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED WEAK TO MODERATE CONVECTION OVER EASTCENTRAL & SOUTHEAST ARABIAN SEA AND COMORIN AREA. SCATTERED LOW AND MEDIUM CLOUDS OVER SOUTHWEST ARABIAN 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
NIL	NIL	NIL	NIL	NIL

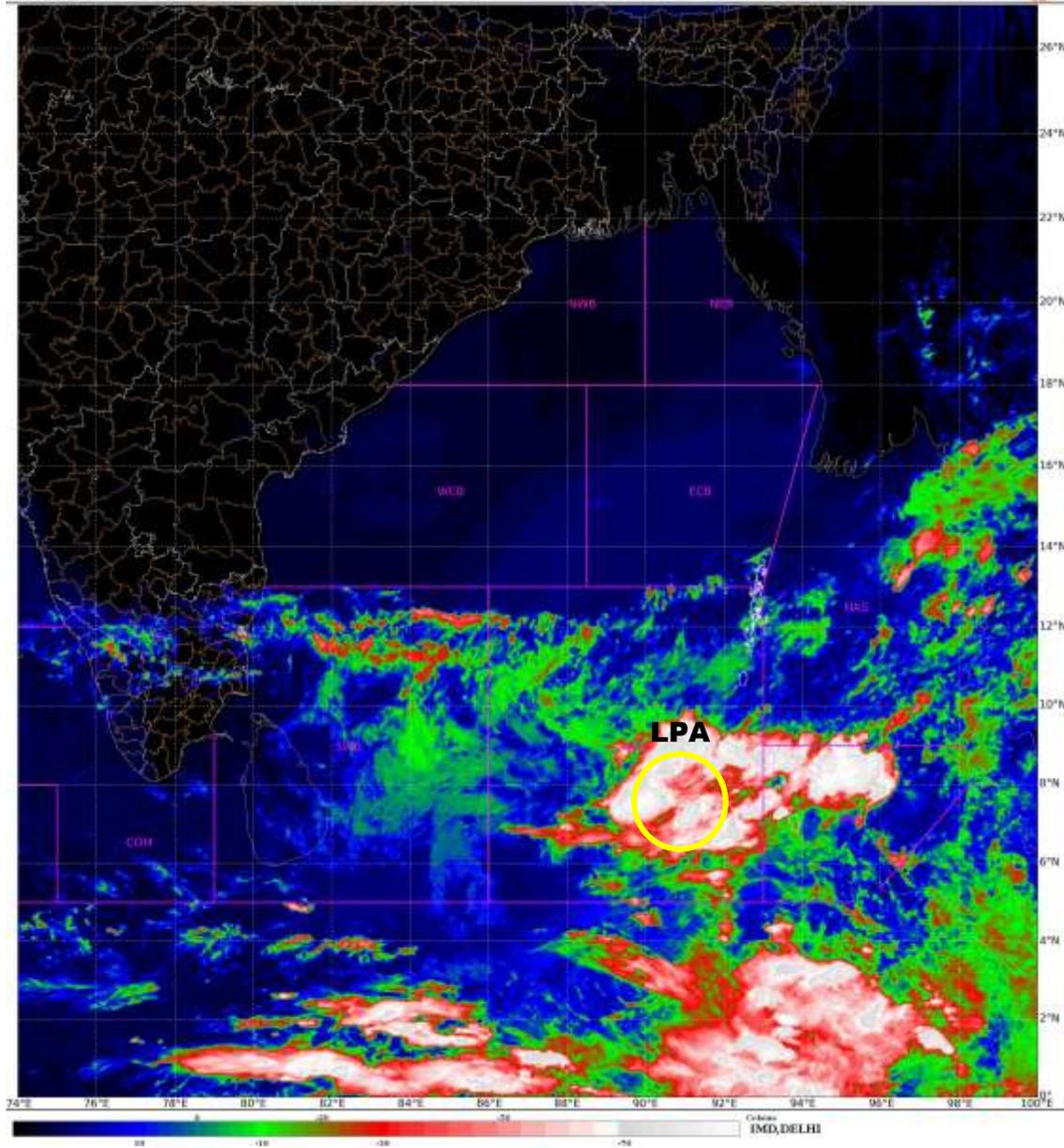
REMARKS:

SEA SURFACE TEMPERATURE IS AROUND 29-30°C OVER ANDAMAN SEA, SOUTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL (BOB). TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM² OVER THE SAME REGION BECOMING LESS THAN 50 KJ/CM² OVER NORTH BOB. THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 3 DAYS AND MOVE TO PHASE 4 WITH AMPLITUDE REMAINING MORE THAN 1. THE PHASE AND AMPLITUDE OF MJO IS CONDUCIVE FOR ENHANCED CONVECTION AND HENCE CYCLOGENESIS OVER THE BOB DURING NEXT 3 DAYS. STRONG WESTERLIES AND EQUATORIAL ROSSBY WAVES ARE LIKELY TO PREVAIL OVER THE REGION DURING NEXT 1 WEEK WHICH WOULD FAVOUR THE GENESIS.

LOW LEVEL VORTICITY HAS NOT CHANGED DURING PAST 24 HOURS AND IS ABOUT 50 X10⁻⁶ S⁻¹ AROUND SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE IS 5-15 X10⁻⁵ S⁻¹ TO THE EAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED AND IS AROUND 10 X10⁻⁵ S⁻¹ AROUND SYSTEM CENTRE. HOWEVER, STRONG EQUATORWARD OUTFLOW IS SEEN IN UPPER LEVELS. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND THE SYSTEM CENTRE WITH DECREASING TREND (BECOMING 10-15 KNOTS) ALONG THE EXPECTED TRACK OF THE SYSTEM.

NUMERICAL MODELS INCLUDING IMD GFS, ECMWF AND ECMWF ENSEMBLE, NCUM (REGIONAL), NCUM (GLOBAL) AND IMD MULTIMODEL ENSEMBLE(MME) ARE INDICATING LIKELIHOOD OF FORMATION OF DEPRESSION OVER SOUTHEAST BOB & ADJOINING SOUTH ANDAMAN SEA ON 19TH MARCH WITH SUBSEQUENT INTENSIFICATION INTO A MARGINAL CYCLONIC STORM AROUND 21ST MARCH. HOWEVER, THERE IS VARIATION AMONG THESE MODELS W.R.T. PEAK INTENSITY WITH IMD GFS INDICATING HIGHER INTENSITY AND ECMWF & NCUM INDICATING INTENSIFICATION UPTO DEEP DEPRESSION STAGE ONLY.

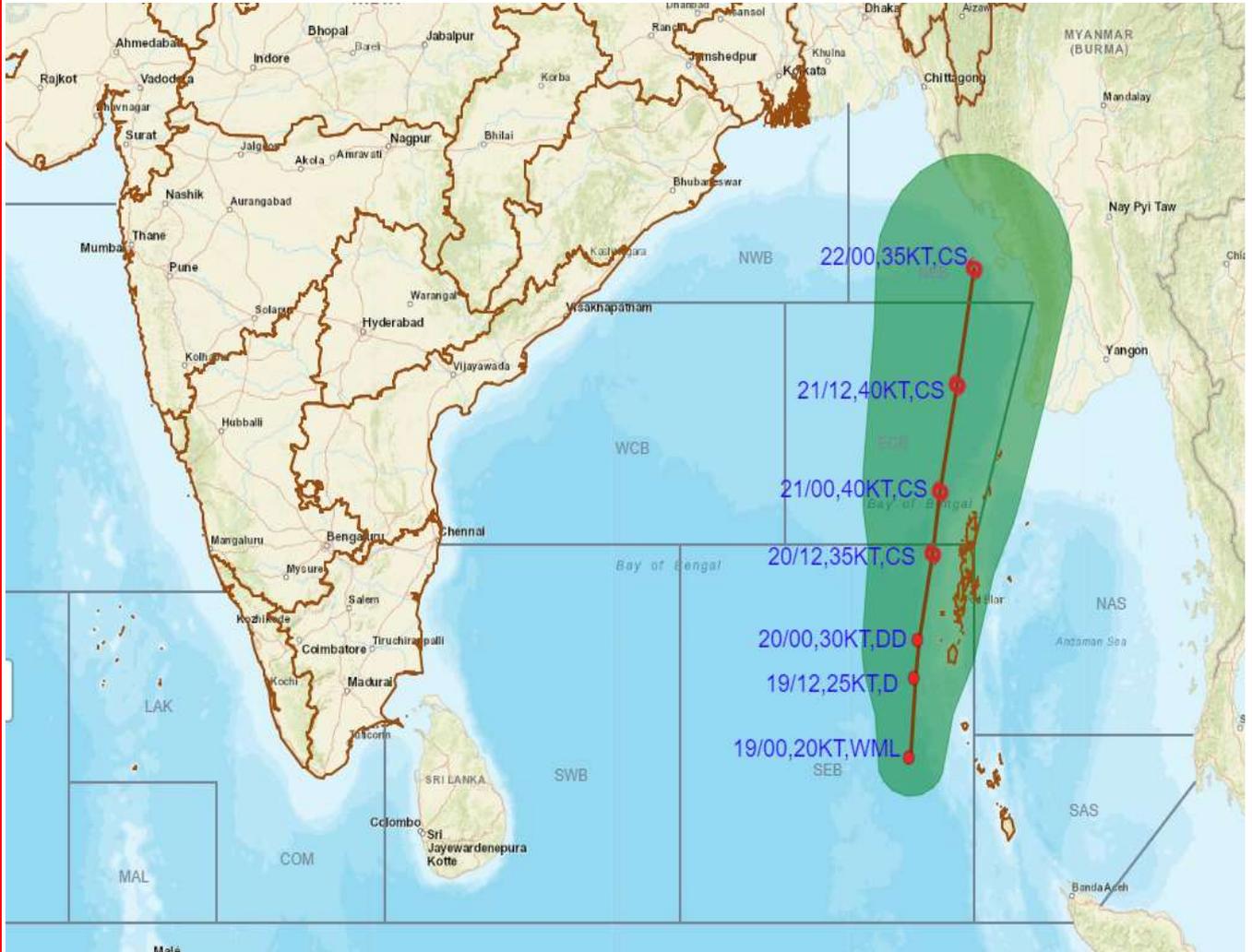
IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE LOW PRESSURE AREA OVER SOUTHEAST BOB AND ADJOINING AREAS IS LIKELY TO MOVE EAST-NORTHEASTWARDS, BECOME A WELL MARKED LOW PRESSURE AREA AND LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA around 0000 UTC OF 19TH. THEREAFTER, IT IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN & NICOBAR ISLANDS AND INTENSIFY INTO A DEPRESSION ON 20TH & INTO A CYCLONIC STORM ON 21ST MARCH. IT WOULD THEN CONTINUE TO MOVE NEARLY NORTH-NORTHEASTWARDS AND REACH NEAR BANGLADESH AND ADJOINING NORTH MYANMAR COAST ON 22ND MARCH.



LPA: LOW PRESSURE AREA



EXPERIMENTAL PRE-GENESIS TRACK AND INTENSITY FORECAST ALONGWITH CONE OF UNCERTAINTY ISSUED AT THE STAGE OF LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL ON 18TH MARCH 2022

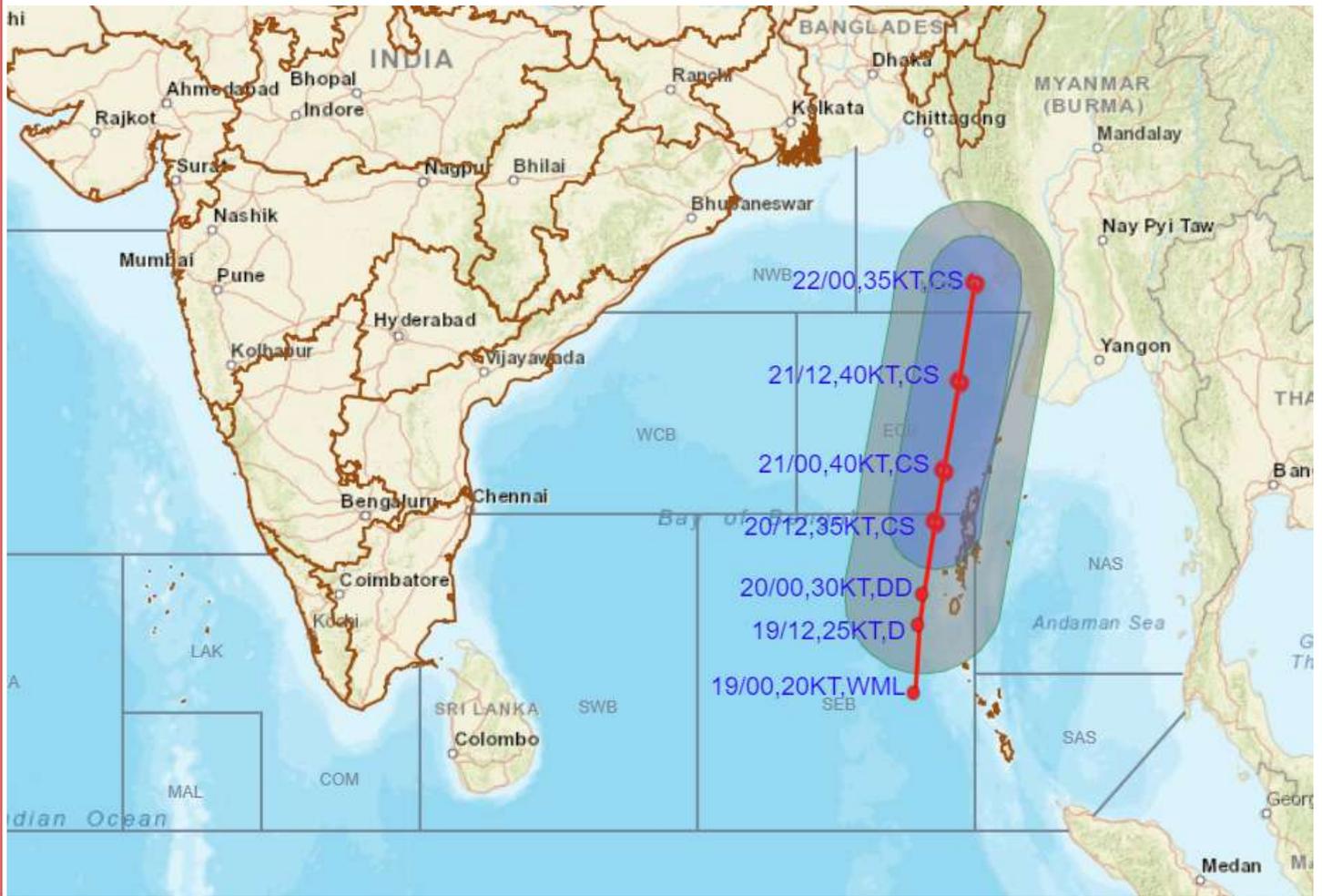


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119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

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



EXPERIMENTAL PRE-GENESIS TRACK AND INTENSITY FORECAST ALONGWITH QUADRANT WIND DISTRIBUTION ISSUED AT THE STAGE OF LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL ON 18TH MARCH 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

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

FISHERMEN WARNING GRAPHICS

INDIA METEOROLOGICAL DEPARTMENT FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

