



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 14.05.2021

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 14.05.2021 BASED ON 0900 UTC OF 14.05.2021.

SUB: DEPRESSION INTENSIFIED INTO A DEEP DEPRESSION OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA.

THE DEPRESSION OVER LAKSHADWEEP AREA MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 19 KMPH DURING PAST 6 HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0300 UTC OF TODAY, THE 14TH MAY, 2021 OVER AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA NEAR LATITUDE 11.5°N AND LONGITUDE 72.5°E, ABOUT 50 KM NORTH-NORTHWEST OF AMINI DIVI (43311), 310 KM WEST-SOUTHWEST OF KANNUR (43315), 1060 KM SOUTH-SOUTHEAST OF VERAVAL (42909).

IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 12 HOURS AND IS VERY LIKELY TO INTENSIFY FURTHER DURING THE SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST DURING 2100 UTC OF 17TH TO 0000 OF 18TH MAY.


FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
14.05.21/0900	11.5/72.5	50-60 gusting to 70	Deep Depression
14.05.21/1800	12.2/72.7	55-65 gusting to 75	Deep Depression
15.05.21/0600	13.7/72.4	80-90 gusting to 100	Cyclonic Storm
15.05.21/1800	15.1/72.0	105-115 gusting to 125	Severe Cyclonic Storm
16.05.21/0600	16.6/71.6	125-135 gusting to 150	Very Severe Cyclonic Storm
16.05.21/1800	18.1/71.0	135-145 gusting to 160	Very Severe Cyclonic Storm
17.05.21/0600	19.6/70.4	150-160 gusting to 175	Very Severe Cyclonic Storm

CONVECTION OVER LAKSHADWEEP AND ADJOINING SOUTHEAST ARABIAN SEA HAS FURTHER ORGANISED AND CLOUDS ARE ORGANISED IN CURVED BAND PATTERN. ASSOCIATED MINIMUM CLOUD TOP TEMPERATURE IS -93°C. INTENSITY OF THE SYSTEM IS CATEGORISED AS T 2.0. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ARABIAN SEA (AS) BETWEEN LATITUDE 6.0°N & 17.0°N AND LONG 58.0°E & 77.5°E AND LAKSHADWEEP AREA.

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH.

REMARKS:

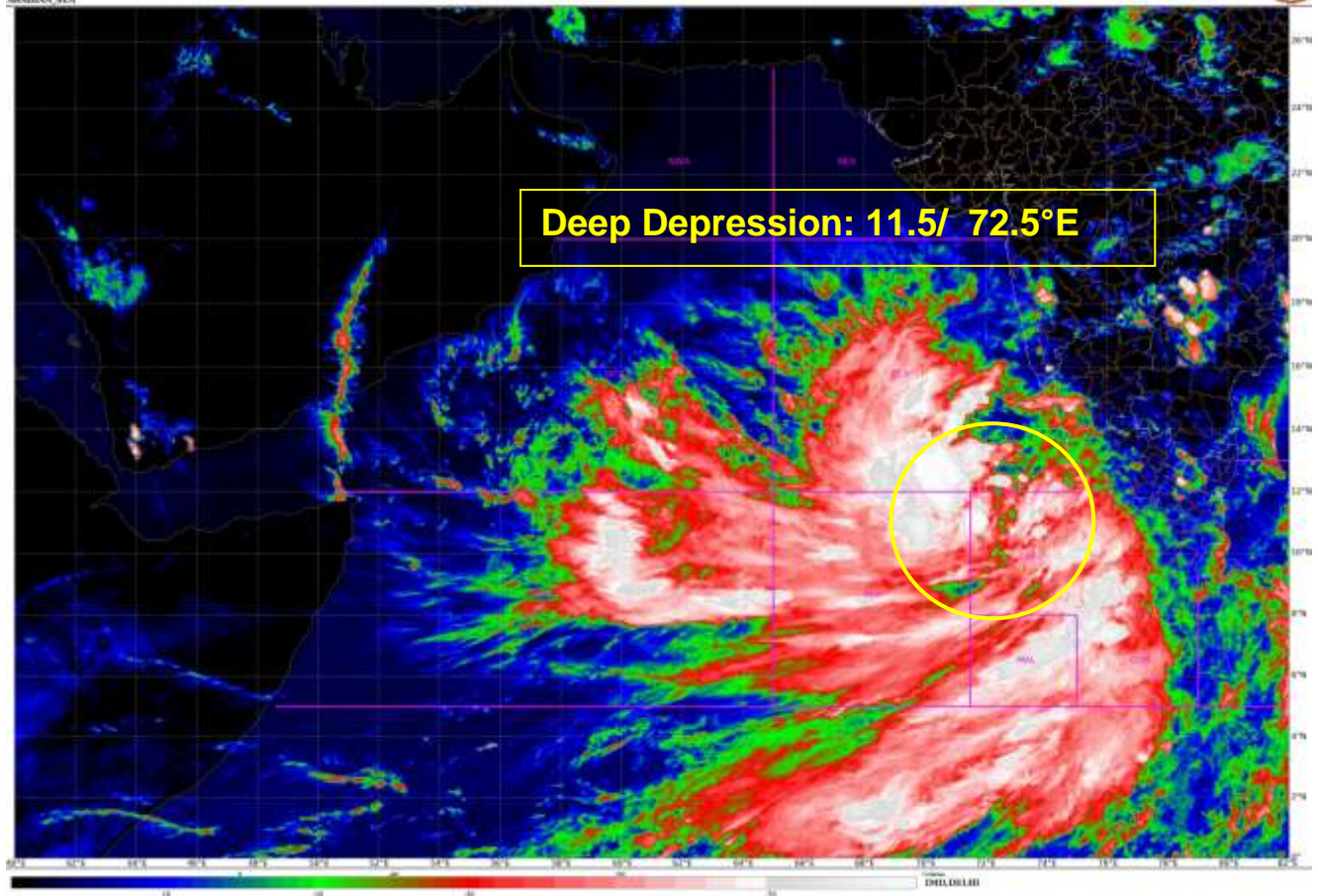
THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 2 WITH AMPLITUDE LESS THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE BECOMING MORE THAN 1 FROM 15TH TILL 17TH. THEREAFTER, IT WILL MOVE TO PHASE 3 WITH AMPLITUDE NEAR 1. THUS, MJO IS CONDUCIVE FOR ENHANCED CONVECTION OVER THE ARABIAN SEA (AS) DURING NEXT 4 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 140 KJ/CM² OVER SOUTHEAST AS AND IS DECREASING OVER CENTRAL PARTS OF CENTRAL AS & NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30⁰C OVER ENTIRE AS & 30-31⁰C OVER SOUTHEAST AS. THE CROSS EQUATORIAL FLOW IN THE NEAR EQUATORIAL BELT IS ENHANCED DUE TO WESTERLY WIND BURST.

THE LOW LEVEL CYCLONIC VORTICITY IS AROUND $150 \times 10^{-6} \text{ S}^{-1}$ TO THE SOUTH-SOUTHEAST OF SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS SAME ($40 \times 10^{-5} \text{ S}^{-1}$) TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE ($40 \times 10^{-5} \text{ S}^{-1}$) IS SEEN TO THE WEST-SOUTHWEST OF SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 12.5⁰N. THE SYSTEM IS IN A REGION OF MODERATE TO HIGH VERTICAL WIND SHEAR (VWS) (20-30 KTS).


MOST OF THE NUMERICAL MODELS ARE INDICATING THAT THE DEEP DEPRESSION OVER LAKSHADWEEP WOULD INTENSIFY INTO A CYCLONIC STORM BY 15TH MAY. IT WOULD INTENSIFY FURTHER AND MOVE NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST BY 0000 UTC OF 18TH MAY.

THUS UNDER FAVOURABLE ENVIRONMENT LIKE MJO, HIGH SST, HIGH TCHP, GOOD POLEWARD OUTFLOW, MODERATE VWS AND WESTERLY WIND BURST, THE DEEP DEPRESSION OVER LAKSHADWEEP AREA WOULD INTENSIFY INTO A CYCLONIC STORM BY 0000 UTC OF 15TH MAY. IT IS VERY LIKELY TO INTENSIFY FURTHER. IT IS LIKELY TO MOVE INITIALLY NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST BY 0000 UTC OF 18TH MAY.

(SUNITHA DEVI. S)
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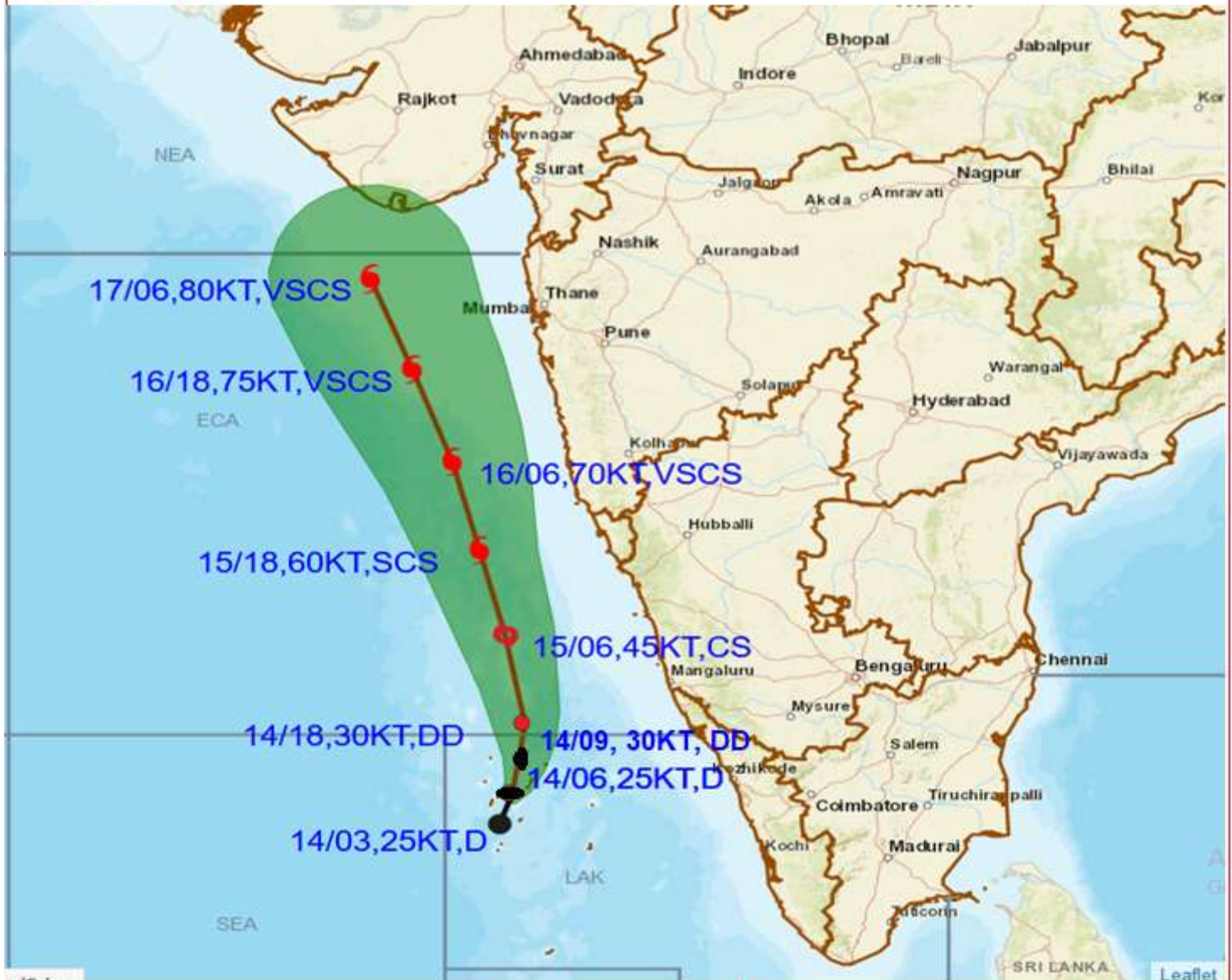


PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER LAKSHADWEEP BASED ON 0900 UTC OF 14TH MAY, 2021



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)

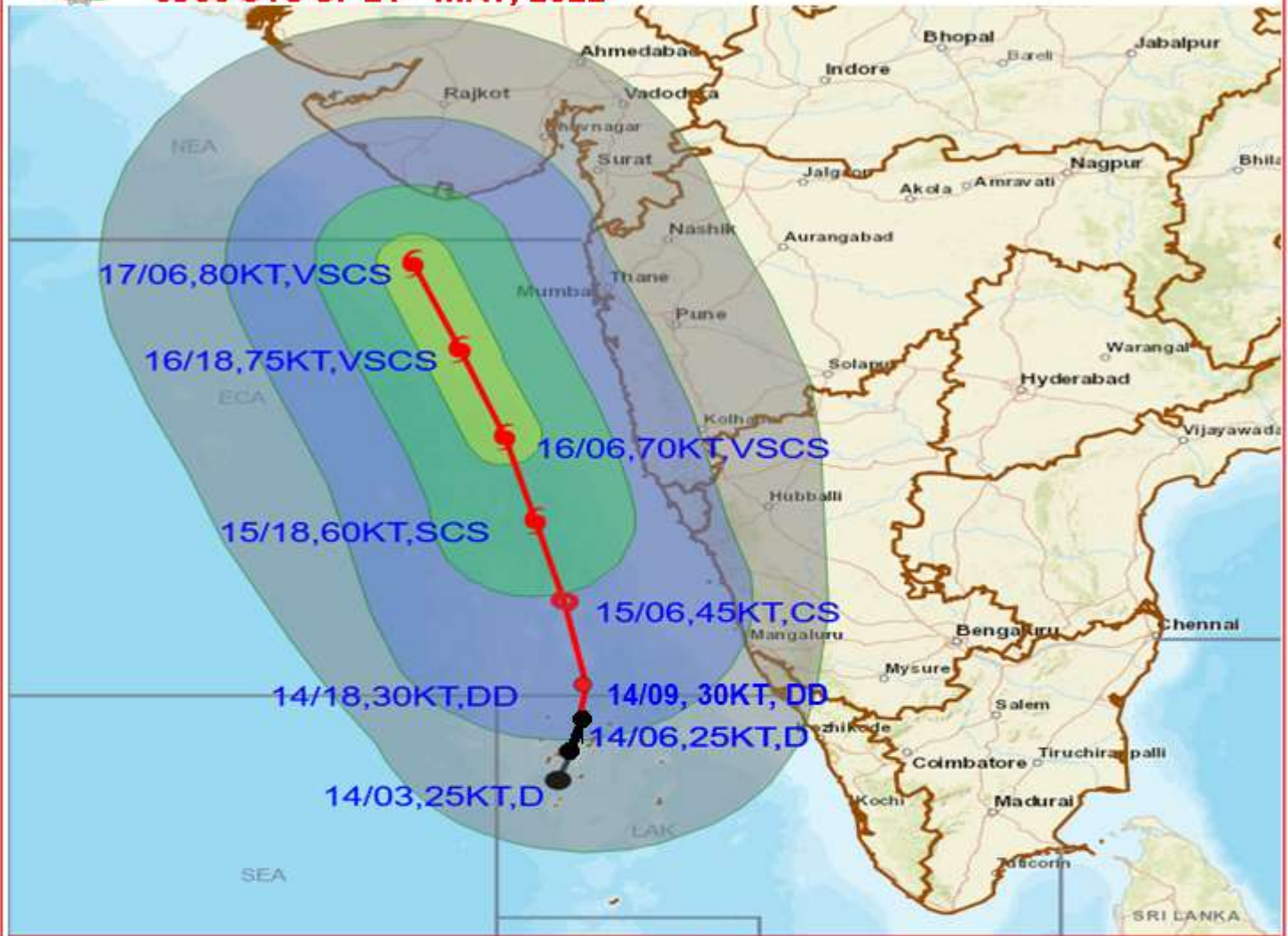
● LESS THAN 34 KT
 ⌀ 34-47 KT
 ⌀ \geq 48 KT
 ■ OBSERVED TRACK
 ■ FORECAST TRACK
 ▲ CONE OF UNCERTAINTY

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER LAKSHADWEEP BASED ON 0900 UTC OF 14TH MAY, 2021



DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
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 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

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