



**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 1530 UTC OF 14.05.2021 BASED ON 1200 UTC OF 14.05.2021.**

**SUB: DEEP DEPRESSION OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA.**

THE DEEP DEPRESSION OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS, AND LAY CENTRED AT 1200 UTC OF 14<sup>TH</sup> MAY, 2021 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA NEAR LATITUDE 11.6°N AND LONGITUDE 72.6°E, ABOUT 55 KM NORTH-NORTHWEST OF AMINI DIVI (43311), 290 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 BY 0000 UTC OF 18<sup>TH</sup> MAY

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SURFACE WIND SPEED (KMPH)	SUSTAINED SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
14.05.21/1200	11.6/72.6	50-60 GUSTING TO 70		DEEP DEPRESSION
15.05.21/0000	12.9/72.7	70-80 GUSTING TO 90		CYCLONIC STORM
15.05.21/1200	14.4/72.4	95-105 GUSTING TO 115		SEVERE CYCLONIC STORM
16.05.21/0000	15.8/71.9	125-135 GUSTING TO 150		VERY SEVERE CYCLONIC STORM
16.05.21/1200	17.3/71.3	135-145 GUSTING TO 160		VERY SEVERE CYCLONIC STORM
17.05.21/0000	18.5/70.5	145-155 GUSTING TO 165		VERY SEVERE CYCLONIC STORM
17.05.21/1200	19.8/69.7	150-160 GUSTING TO 175		VERY SEVERE CYCLONIC STORM
18.05.21/0000	21.4/69.0	150-160 GUSTING TO 175		VERY SEVERE CYCLONIC STORM
18.05.21/1200	23.0/69.2	125-135 GUSTING TO 150		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.

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 ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH.

**REMARKS:**

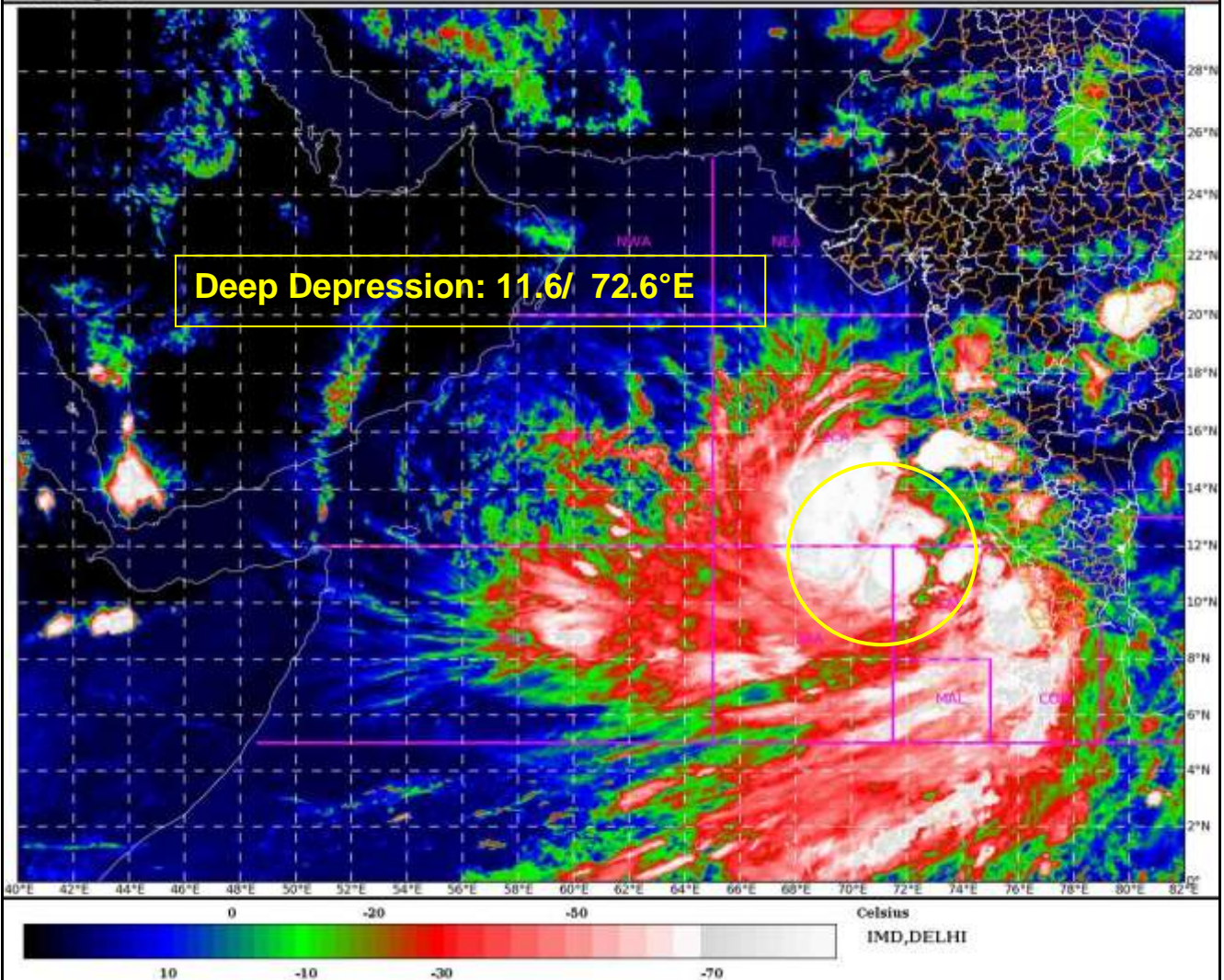
THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 2 WITH AMPLITUDE LESS THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE BECOMING MORE THAN 1 FROM 15<sup>TH</sup> TILL 17<sup>TH</sup>. THEREAFTER, IT WILL MOVE TO PHASE 3 WITH AMPLITUDE NEAR 1. THUS, MJO IS CONDUCIVE FOR ENHANCED CONVECTION OVER THE ARABIAN SEA (AS) DURING NEXT 4 DAYS. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 140 KJ/CM<sup>2</sup> OVER SOUTHEAST AS AND IS DECREASING OVER CENTRAL PARTS OF CENTRAL AS & NORTH AS. SEA SURFACE TEMPERATURE (SST) IS AROUND 30<sup>0</sup>C OVER ENTIRE AS & 30-31<sup>0</sup>C 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 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 SOUTHWEST OF SYSTEM CENTRE. UPPER TROPOSPHERIC RIDGE RUNS ALONG 12.5<sup>0</sup>N. THE SYSTEM IS IN A REGION OF MODERATE TO HIGH VERTICAL WIND SHEAR (VWS) (25-30 KTS).

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

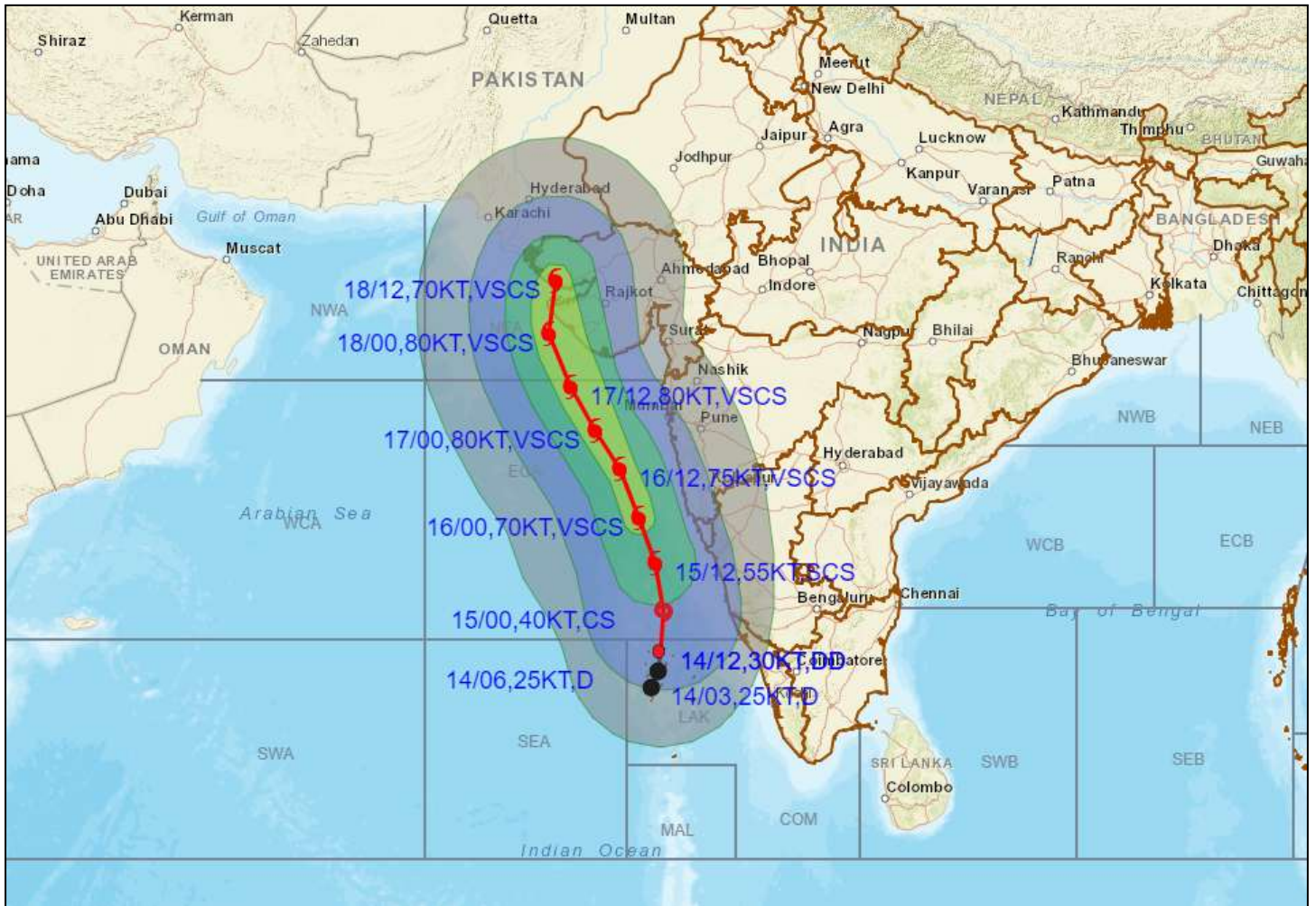
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**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 14<sup>TH</sup> MAY, 2021**

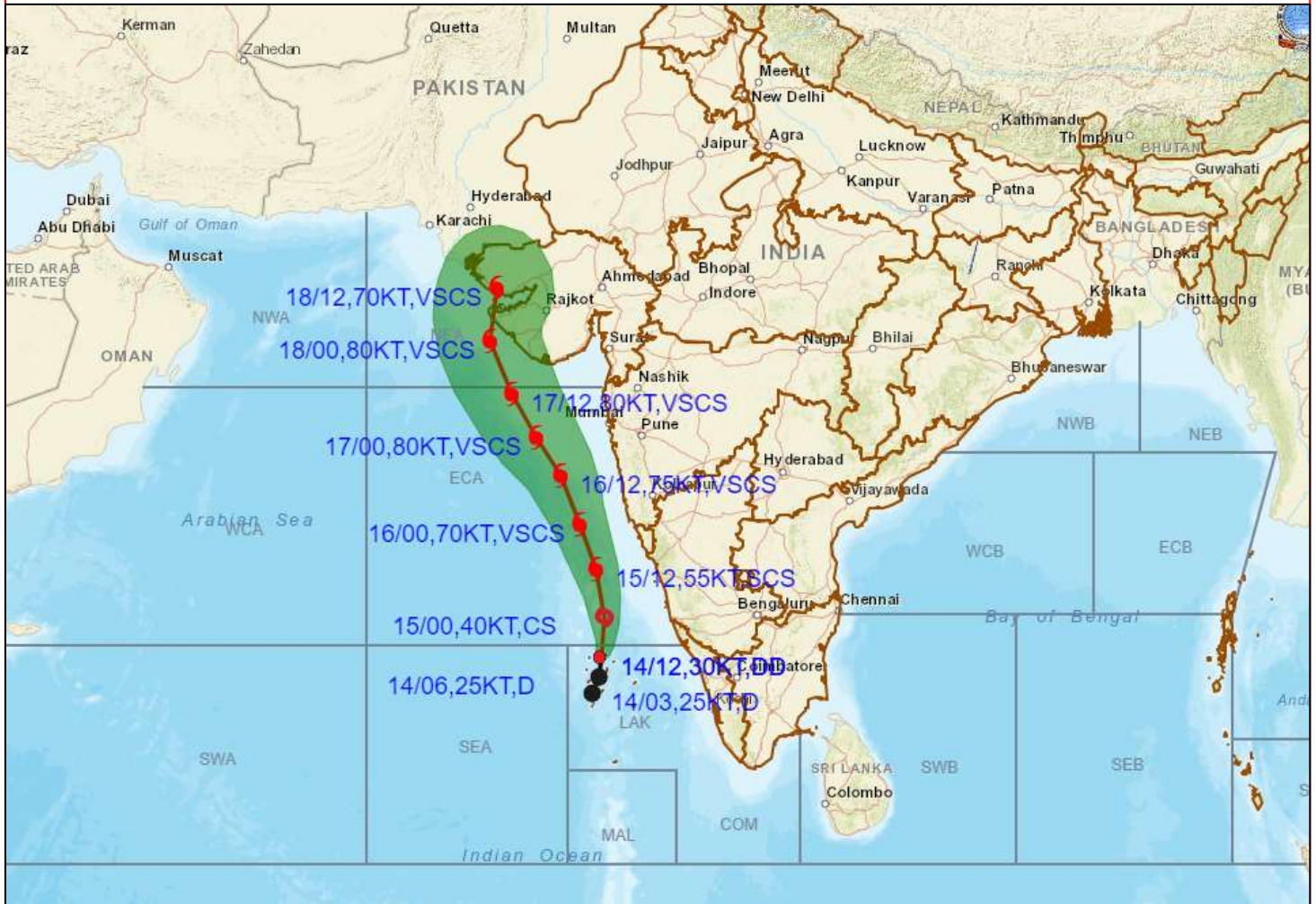


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## OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA BASED ON 1200 UTC OF 14<sup>TH</sup> MAY, 2021



**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)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM ( $\geq 20$  KT)

LESS THAN 34 KT

34-47 KT

$\geq 48$  KT

OBSERVED TRACK

FORECAST TRACK

CONE OF UNCERTAINTY

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