



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
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 0600 UTC OF 14.05.2021 BASED ON 0300 UTC OF 14.05.2021.

SUB: DEPRESSION OVER LAKSHADWEEP AREA

THE WELL MARKED LOW PRESSURE AREA OVER LAKSHADWEEP AREA & ADJOINING SOUTHEAST ARABIAN SEA MOVED EAST-NORTHEASTWARDS, CONCENTRATED INTO A **DEPRESSION** AND LAY CENTRED AT 0300 UTC OF TODAY, THE 14TH MAY, 2021 OVER LAKSHADWEEP AREA NEAR LATITUDE 10.5°N AND LONGITUDE 72.3°E, ABOUT 80 KM SOUTH-SOUTHWEST OF AMINI DIVI (43311), 360 KM WEST-SOUTHWEST OF KANNUR (43315), 1170 KM SOUTH-SOUTHEAST OF VERAVAL (42909).

IT IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION DURING NEXT 12 HOURS AND INTO A CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO INTENSIFY FURTHER. IT IS VERY LIKELY TO MOVE INITIALLY NORTH-NORTHEASTWARDS TILL TODAY EVENING. IT WOULD THEN MOVE NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST BY 18TH MAY MORNING.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SURFACE WIND SPEED (KMPH)	SUSTAINED WIND SPEED	CATEGORY OF CYCLONIC DISTURBANCE
14.05.21/0300	10.5/72.3	45-55 GUSTING TO 65		DEPRESSION
14.05.21/1200	11.8/73.1	55-65 GUSTING TO 75		DEEP DEPRESSION
15.05.21/0000	13.1/73.1	70-80 GUSTING TO 90		CYCLONIC STORM
15.05.22/1200	14.7/72.6	90-100 GUSTING TO 110		SEVERE CYCLONIC STORM
16.05.21/0000	16.1/72.2	110-120 GUSTING TO 135		SEVERE CYCLONIC STORM
16.05.21/1200	17.5/71.6	130-140 GUSTING TO 155		VERY SEVERE CYCLONIC STORM
17.05.21/0000	19.1/70.8	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 1.5. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER ARABIAN SEA (AS) BETWEEN LATITUDE 6.0°N & 15.0°N AND LONG 57.0°E & 78.0°E AND LAKSHADWEEP AREA.

THE ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH.

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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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 HAS FURTHER ORGANISED IN PAST 24 HOURS AND IS AROUND 200 X10⁻⁶ S⁻¹ TO THE SOUTH-SOUTHWEST OF SYSTEM CENTRE OVER SOUTHEAST AS. LOW LEVEL CONVERGENCE HAS INCREASED DURING PAST 24 HOURS (40 X10⁻⁵ S⁻¹) TO THE SOUTHWEST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE (40 X 10⁻⁵ 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 LOW TO MODERATE VERTICAL WIND SHEAR (VWS) (10-15 KTS).

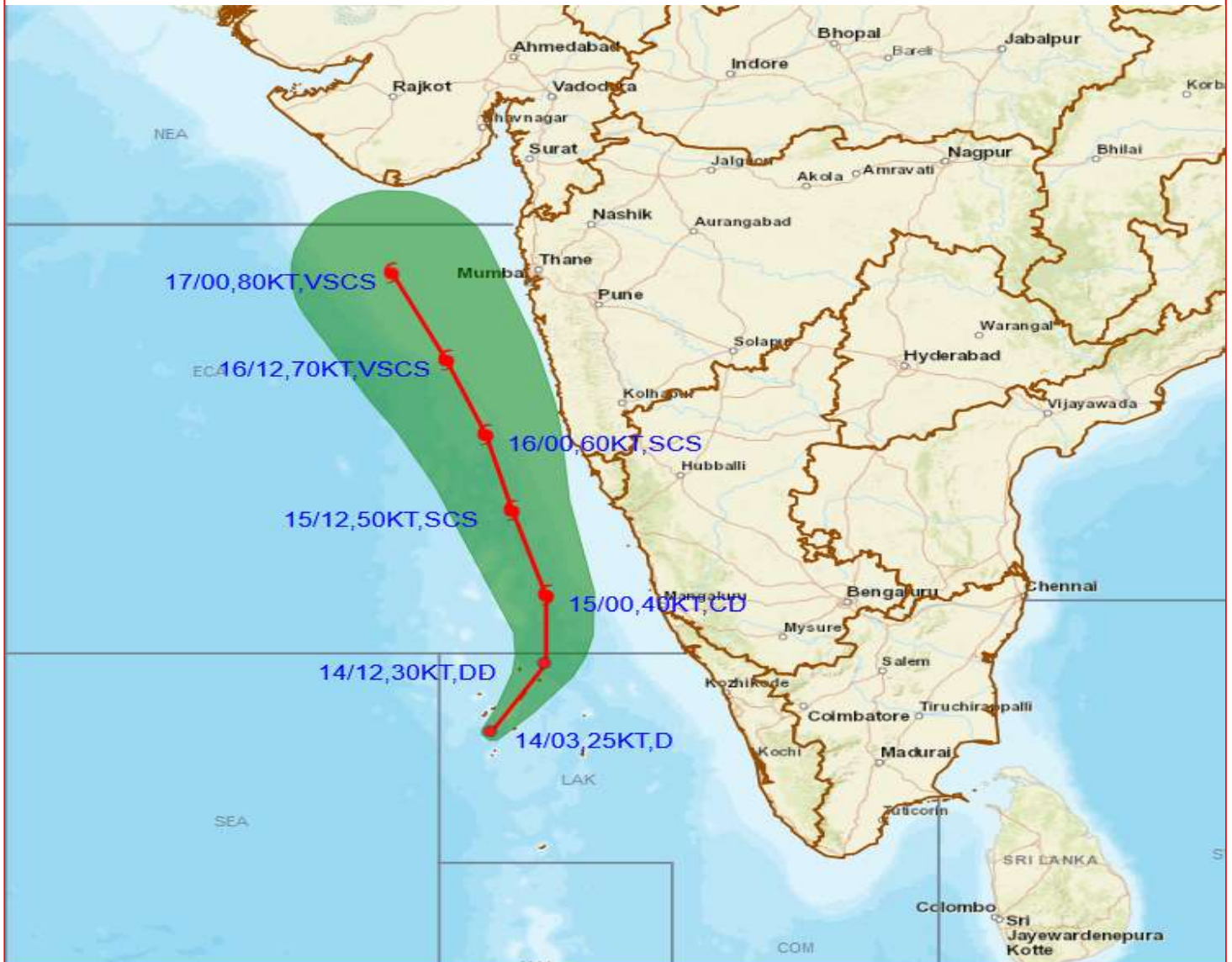
MOST OF THE NUMERICAL MODELS ARE INDICATING THAT THE DEPRESSION OVER LAKSHADWEEP WOULD INTENSIFY INTO A CYCLONNIC STORM BY 15TH MAY. IT WOULD INTENSIFY FURTHER AND MOVE INITIALLY NORTH-NORTHEASTWARDS, THEN NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST BY 18TH MAY MORNING.

THUS UNDER FAVOURABLE ENVIRONMENT LIKE MJO, HIGH SST, HIGH TCHP, GOOD POLEWARD OUTFLOW, MODERATE VWS AND WESTERLY WIND BURST, A DEPRESSION HAS FORMED OVER LAKSHADWEEP AREA AT 0300 UTC OF TODAY, THE 14TH MAY. IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM BY 15TH MAY. IT IS VERY LIKELY TO INTENSIFY FURTHER. IT IS LIKELY TO MOVE INITIALLY NORTH-NORTHEASTWARDS TILL TODAY EVENING. IT WOULD THEN MOVE NORTH-NORTHWESTWARDS AND REACH NEAR GUJARAT COAST BY 18TH MAY MORNING

(SUNITHA S DEVI)
SCIENTIST-F



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEPRESSION LAKSHADWEEP BASED ON 0300 UTC OF 14TH MAY, 2021



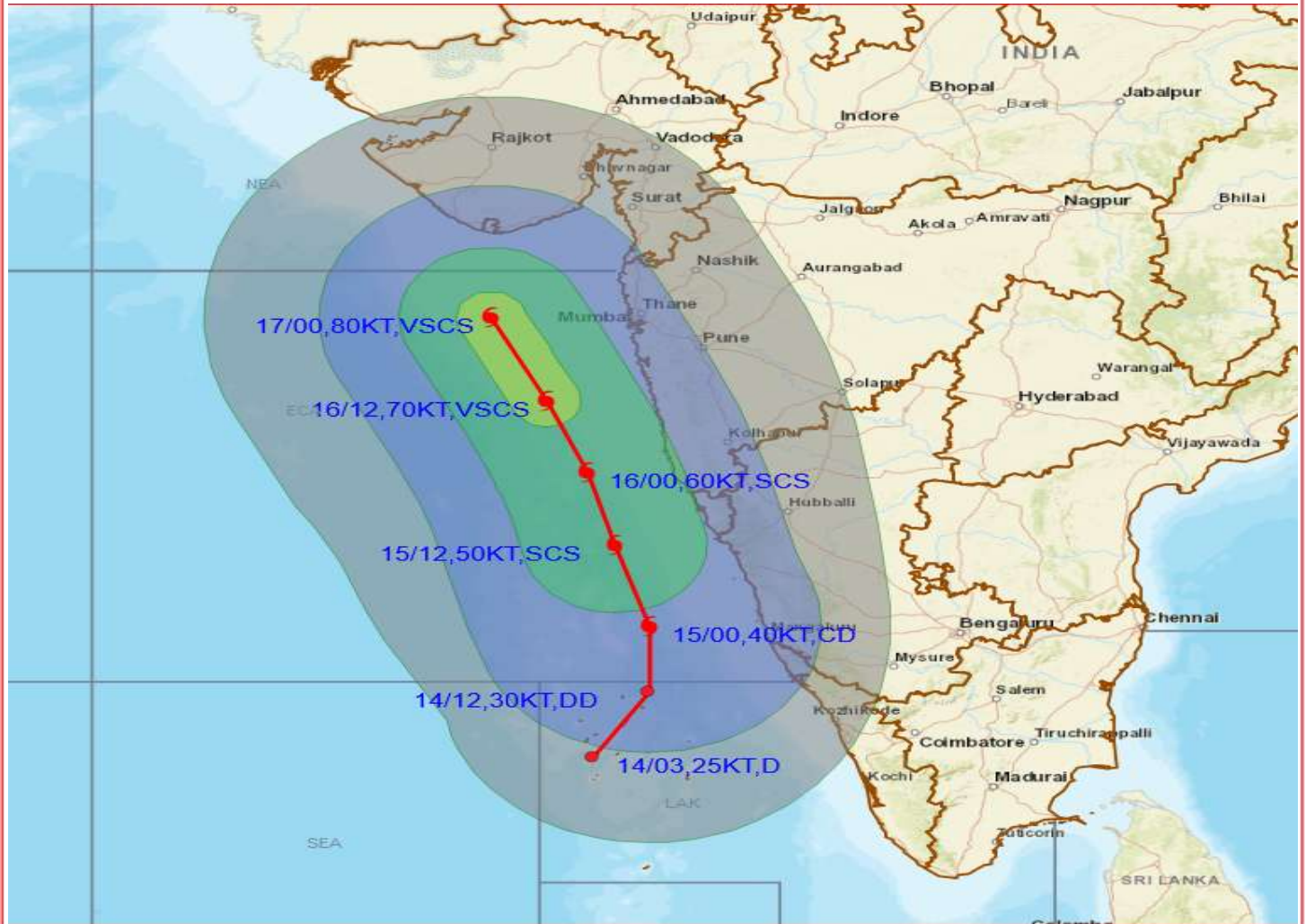
<p>DATE/TIME IN UTC IST=UTC + 0530 L: LOW PRESSURE AREA WML: WELL MARKED LOW PRESSURE AREA D: DEPRESSION (17-27 KT) DD: DEEP DEPRESSION (28-33 KT) CS: CYCLONIC STORM (34-47 KT) SCS: SEVERE CYCLONIC STORM (48-63KT) VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT) ECS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT) SuCS: SUPER CYCLONIC STORM (≥ 120 KT)</p>	<ul style="list-style-type: none"> LESS THAN 34 KT 34-47 KT ≥ 48 KT OBSERVED TRACK FORECAST TRACK CONE OF UNCERTAINTY
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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 QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER LAKSHADWEEP BASED ON 0300 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
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ \geq 64 KT (\geq 118 KMPH)

IMPACT OVER THE SEA

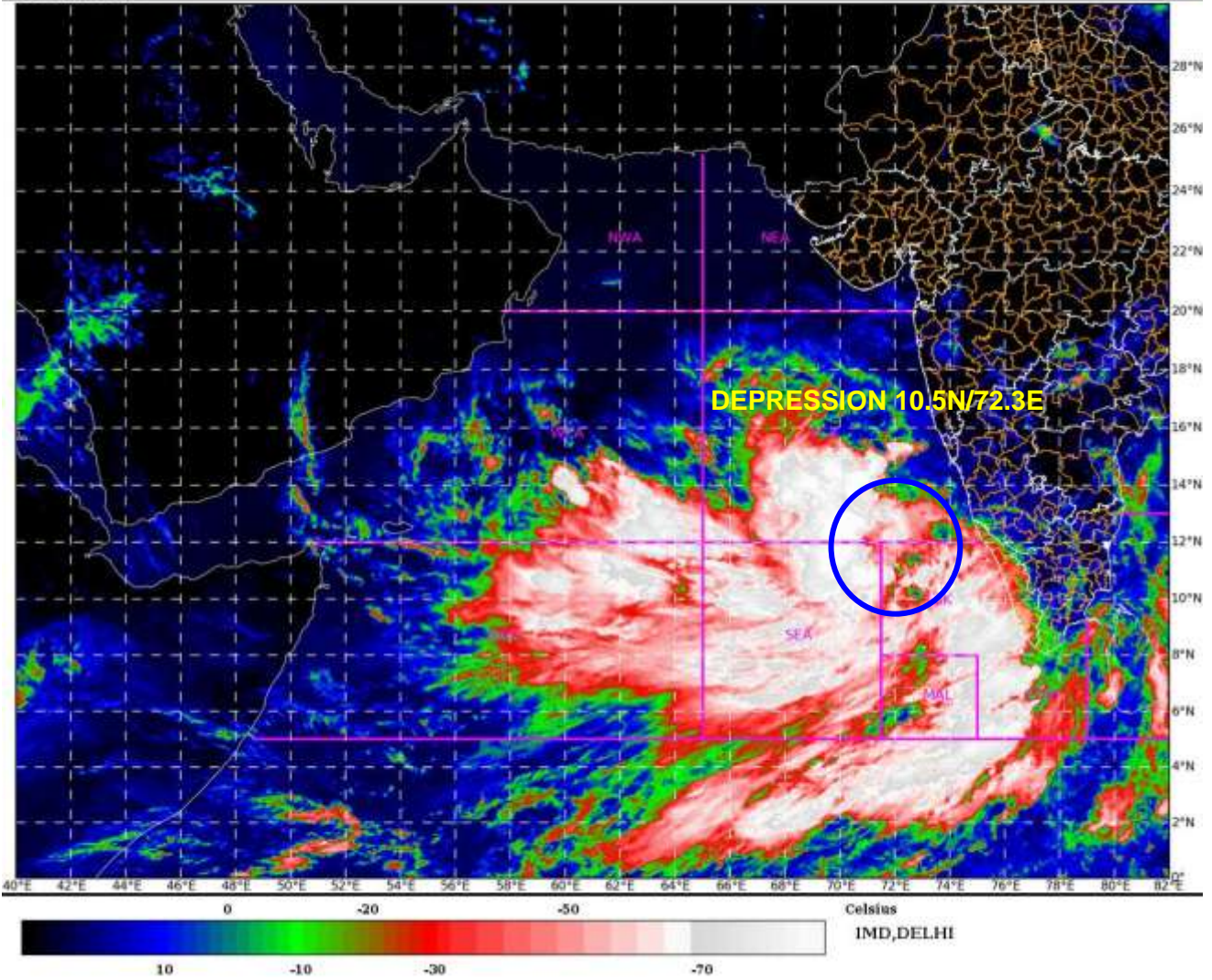
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
\geq 64 (\geq 118)	Phenomenal	Total suspension of fishing operations

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SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

14-05-2021/(0600 to 0626) GMT
14-05-2021/(1130 to 1156) IST



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