REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 10.06.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0930 UTC OF 10.06.2019 BASED ON 0600 UTC OF 10.06.2019.

DEPRESSION INTENSIFIED INTO DEEP DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA & LAKSHADWEEP AREA

THE DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA & LAKSHADWEEP AREA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0600 UTC OF TODAY, THE 10TH JUNE, 2019 NEAR LATITUDE 12.5°N AND LONGITUDE 70.9°E OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA & LAKSHADWEEP AREA, ABOUT 250 KM NORTHWEST OF AMINIDIVI (43311) (LAKSHADWEEP), 760 KM SOUTH-SOUTHWEST OF MUMBAI (43003) (MAHARASHTRA) AND 930 KM SOUTH-SOUTHEAST OF VERAVAL (42909) (GUJARAT). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A SEVERE CYCLONIC STORM SUBSEQUENT 24 HOURS. IT IS LIKELY TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 72 HOURS.

IT IS VERY LIKELY TO CAUSE ADVERSE IMPACT IN TERMS OF WIND & RAINFALL OVER SAURASHTRA & KUTCH MAINLY ON 13TH & 14TH JUNE, 2019.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
10.06.19/0600	12.5/70.9	50-60 GUSTING TO 70	DEEP DEPRESSION
10.06.19/1200	13.2/70.8	55-65 GUSTING TO 75	DEEP DEPRESSION
11.06.19/0000	14.6/70.5	65-75 GUSTING TO 85	CYCLONIC STORM
11.06.19/1200	16.0/70.3	80-90 GUSTING TO 100	CYCLONIC STORM
12.06.19/0000	17.5/70.0	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
12.06.19/1200	19.0/69.8	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
13.06.19/0000	20.3/69.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC ON 10TH JUNE, 2019 THE INTENSITY OF THE SYSTEM OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA & LAKSHADWEEP AREA IS T2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 997 HPA.

AT 0600 UTC OF 10TH JUNE, A BOUY LOCATED AT 10.3°N/72.6°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1004.9 HPA AND MEAN SURFACE WIND SPEED OF 240°/ 19 KNOTS. ANOTHER BOUY LOCATED AT 12°N/68.7°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1002.6 HPA AND MEAN SURFACE WIND SPEED OF 260°/ 31 KNOTS. AMINI DIVI (43311) REPORTED A MEAN SEA LEVEL

PRESSURE OF 1002.6 HPA AND MEAN SURFACE WIND SPEED OF 260°/ 31 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3 DAYS. THEREAFTER, IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GREATER THAN 1 AND REMAIN IN SAME PHASE FOR SUBSEQUENT 4 DAYS. HENCE, MJO PHASE WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION AND INTENSIFICATION OF THE SYSTEM OVER ARABIAN SEA.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 31˚C OVER CENTRAL AND SOUTH ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-110 KJ/CM^2 OVER THE SYSTEM AREA. IT IS LESS THAN 60 KJ/CM^2 TO THE NORTH OF 20^0 N. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 200 X10^{-5}SEC^{-1} TO THE WEST OF THE SYSTEM CENTRE. POSITIVE VORTICITY IS EXTENDING UPTO 200 HPA LEVEL. THE LOWER LEVEL CONVERGENCE INCREASED AND IS ABOUT 50 X10 $^{-5}$S^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10^{-5}S^{-1} TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) OVER THE SYSTEM AREA. IT IS DECREASING TOWARDS THE NORTH. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 20° N.

AS THE DEEP DEPRESSION IS LYING IN A FAVOURABLE ENVIRONMENTAL CONDITION, IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS.

MAJORITY OF NUMERICAL MODELS INCLUDING ECMWF, NCMRWF UNIFIED MODELS (NCUM), NCMRWF ENSEMBLE PREDICTION SYSTEM (NEPS), IMD GLOBAL FORECAST SYSTEM (GFS), NCEP GFS, GLOBAL ENSEMBLE FORECATING SYSTEM (GEFS) AGREE WITH THE ABOVE OBSERVATION.

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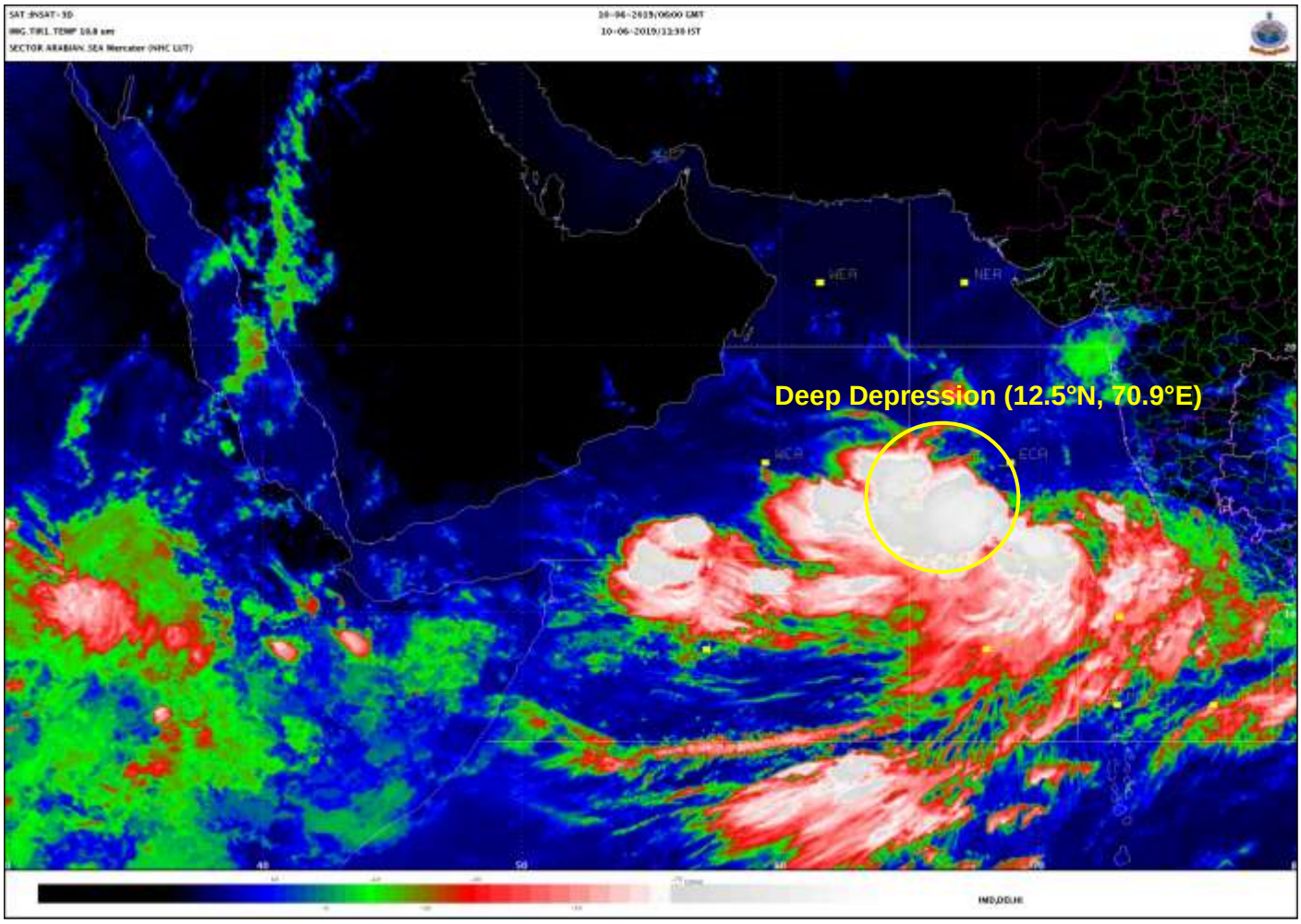
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



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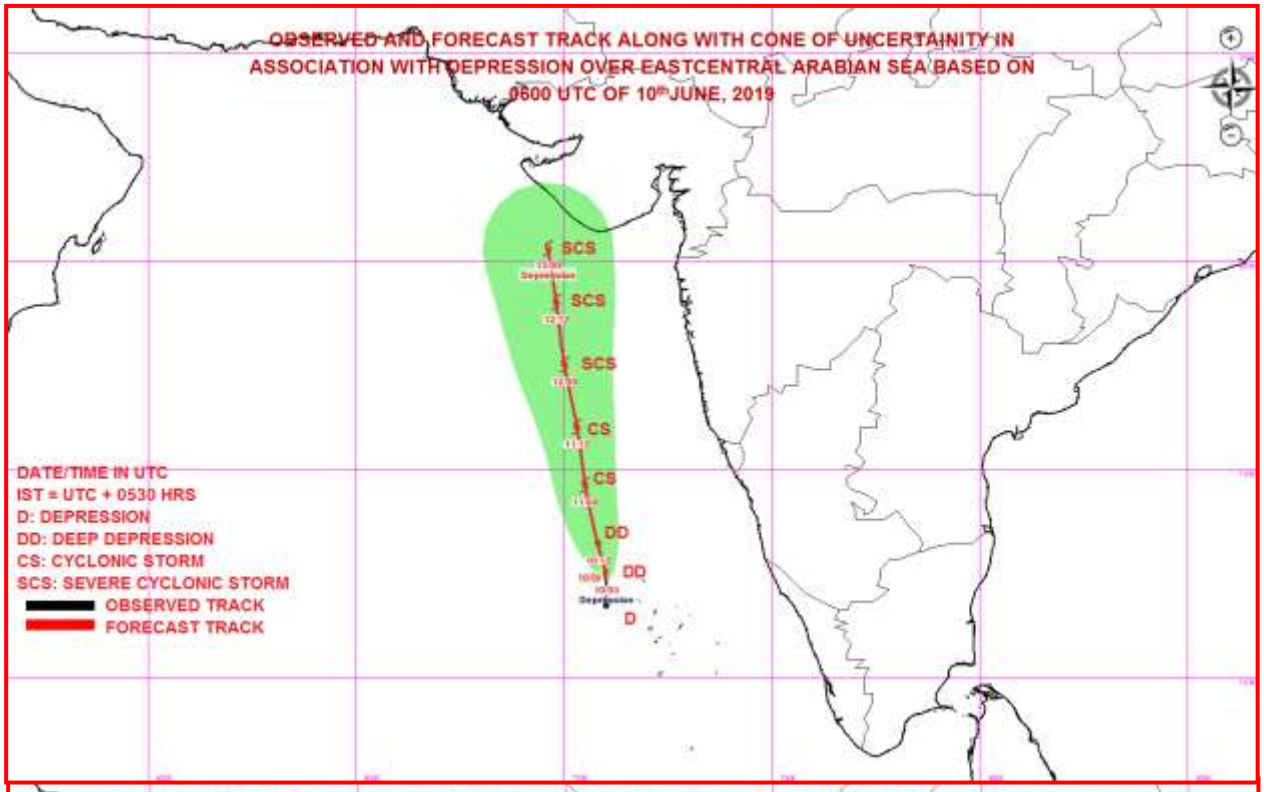

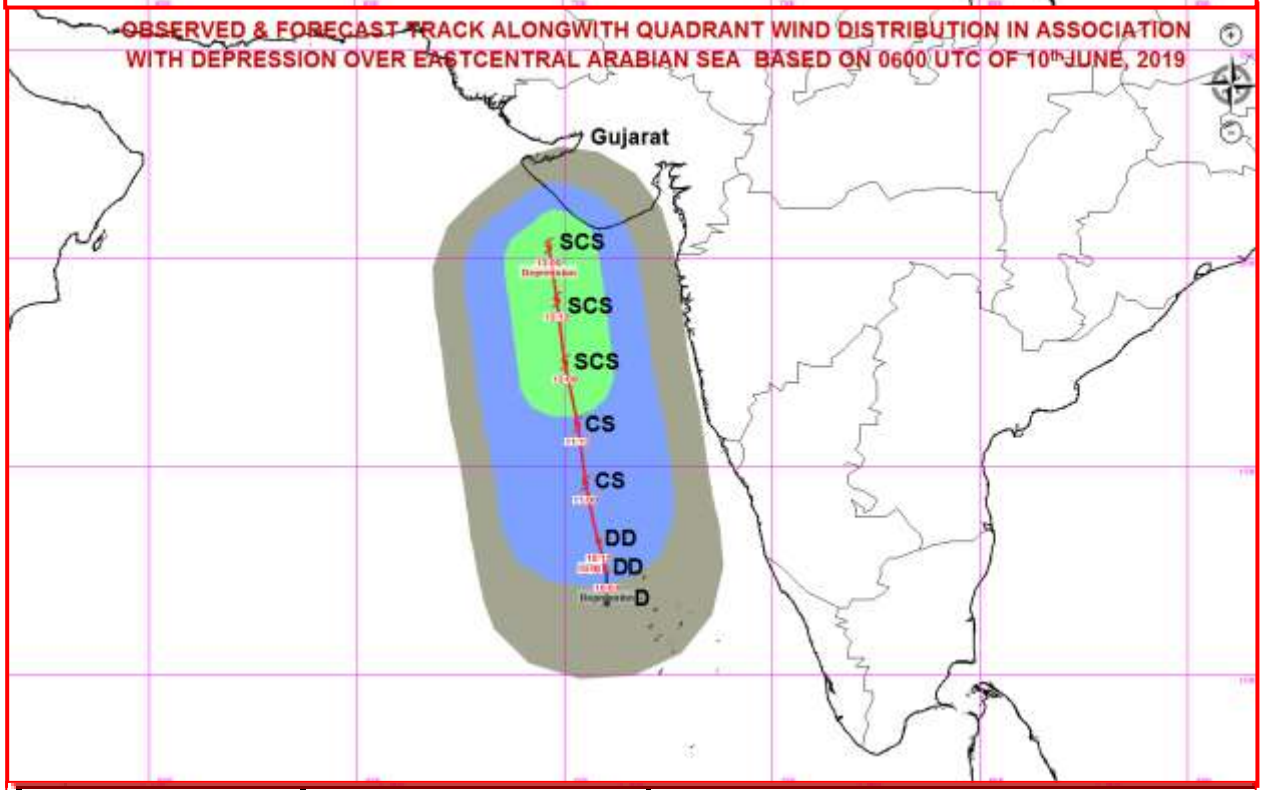

MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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