REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 01.06.2020

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 01.06.2020 BASED ON 0600 UTC OF 01.06.2020.

SUB: DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA: PRE CYCLONE WATCH FOR NORTH MAHARASHTRA-SOUTH GUJARAT COASTS OF INDIA

THE **DEPRESSION** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY THE 1ST JUNE, 2020 NEAR LATITUDE 13.7°N AND LONGITUDE 71.2°E ABOUT 340 KM SOUTHWEST OF PANJIM (43192), 630KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 850 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA DURING NEXT 06 HOURS AND ***INTENSIFY FURTHER INTO A CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA DURING THE SUBSEQUENT 24 HOURS***. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS INITIALLY TILL 0000 UTC OF 02ND JUNE AND THEN RECURVE NORTH-NORTHEASTWARDS AND CROSS NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS BETWEEN HARIHARESHWAR (RAIGAD, MAHARASHTRA) AND DAMAN (42916) DURING 0700 TO 1200 UTC OF 3RD JUNE.

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
01.06.20/0600	13.7/71.2	45-55 GUSTING TO 65	DEPRESSION
01.06.20/1200	14.2/71.0	50-60 GUSTING TO 70	DEEP DEPRESSION
01.06.20/1800	14.7/70.9	55-65 GUSTING TO 75	DEEP DEPRESSION
02.06.20/0000	15.1/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
02.06.20/0600	15.6/71.0	80-90 GUSTING TO 100	CYCLONIC STORM
02.06.20/1800	16.8/71.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
03.06.20/0600	18.9/72.7	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
03.06.20/1800	20.5/74.3	70-80 GUSTING TO 90	CYCLONIC STORM
04.06.20/0600	22.0/76.0	45-55 GUSTING TO 65	DEPRESSION

REMARKS:

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0600 UTC OF 01ST JUNE, THE INTENSITY OF THE SYSTEM IS 1.5. ASSOCIATED SCATTERED TO BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OBSERVED OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA BETWEEN LATITUDE 7.5N TO

17.0N AND LONGITUDE 65.0E TO 74.5E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93°C.

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

AT 0600 UTC OF 01ST JUNE, A BOUY LOCATED AT 12.0°N/68.70°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1010.0 HPA AND MEAN SURFACE WIND SPEED OF 20°/19.4 KNOTS AND ANOTHR BOUY LOCATED AT 10.6°N/72.3°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1010.3 HPA AND MEAN SURFACE WIND SPEED OF 80°/21.4 KNOTS.

MJO CONDITION: THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 1 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE TO BE IN SAME PHASE DURING NEXT 7 DAYS WITH AMPLITUDE REMAINING MORE THAN 1. THUS MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE ARABIAN SEA DURING NEXT 4-5 DAYS.

SEA CONDITIONS: THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER THE ENTIRE AS. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM^2 OVER MAJOR PARTS OF SOUTH, SOUTHEAST & EASTCENTRAL AS. IT IS ABOUT 110-120 KJ/CM^2 OVER SOUTHEAST & ADJOINING EASTCENTRAL AS AND BECOMING LESS THAN 100 KJ/CM^2 OVER KARNATAKA, MAHARASHTRA AND GUJARAT COAST.
POSITIVE LOWER LEVEL VORTICITY IS ABOUT 100 X10^{-6}SEC^{-1} OVER EASTCENTRAL ARABIAN SEA AREA. IT IS EXTENDING UPTO 500 HPA LEVEL TILTING SOUTHWARDS WITH HEIGHT. THE LOWER LEVEL CONVERGENCE IS AROUND 20X10^{-5} SEC^{-1} OVER THE SYSTEM CENTER. THE UPPER LEVEL DIVERGENCE IS 20X10^{-5} SEC^{-1} AROUND THE SYSTEM CENTER. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (10-15 KTS) AROUND THE SYSTEM CENTRE.

MODEL GUIDANCE: MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GFS, NCEP GFS, GEFS, NEPS, NCUM ETC. ARE INDICATING FURTHER INTENSIFICATION OF THE SYSTEM, INITIAL NORTHWARD MOVEMENT AND NORTH-NORTHEASTWARD RE-CURVATURE THEREAFTER.

CONCLUSION: UNDER FAVOURABLE ENVIRONMENTAL CONDITIONS LIKE LOW VERTICAL WIND SHEAR AND HIGH OCEAN HEAT CONTENT, ALONG WITH THE WIND SURGE ASSOCIATED WITH THE SOUTHWEST MONSOON FLOW OVER THE REGION, THE SYSTEM IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA DURING NEXT 06 HOURS AND ***INTENSIFY FURTHER INTO A CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA DURING THE SUBSEQUENT 24 HOURS***. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS INITIALLY TILL 00UTC OF 02ND JUNE AND THEN RECURVE NORTH-NORTHEASTWARDS AND CROSS NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS BETWEEN HARIHARESHWAR (RAIGAD, MAHARASHTRA) AND DAMAN (42916) DURING 0700 TO 1200 UTC OF 3RD JUNE .

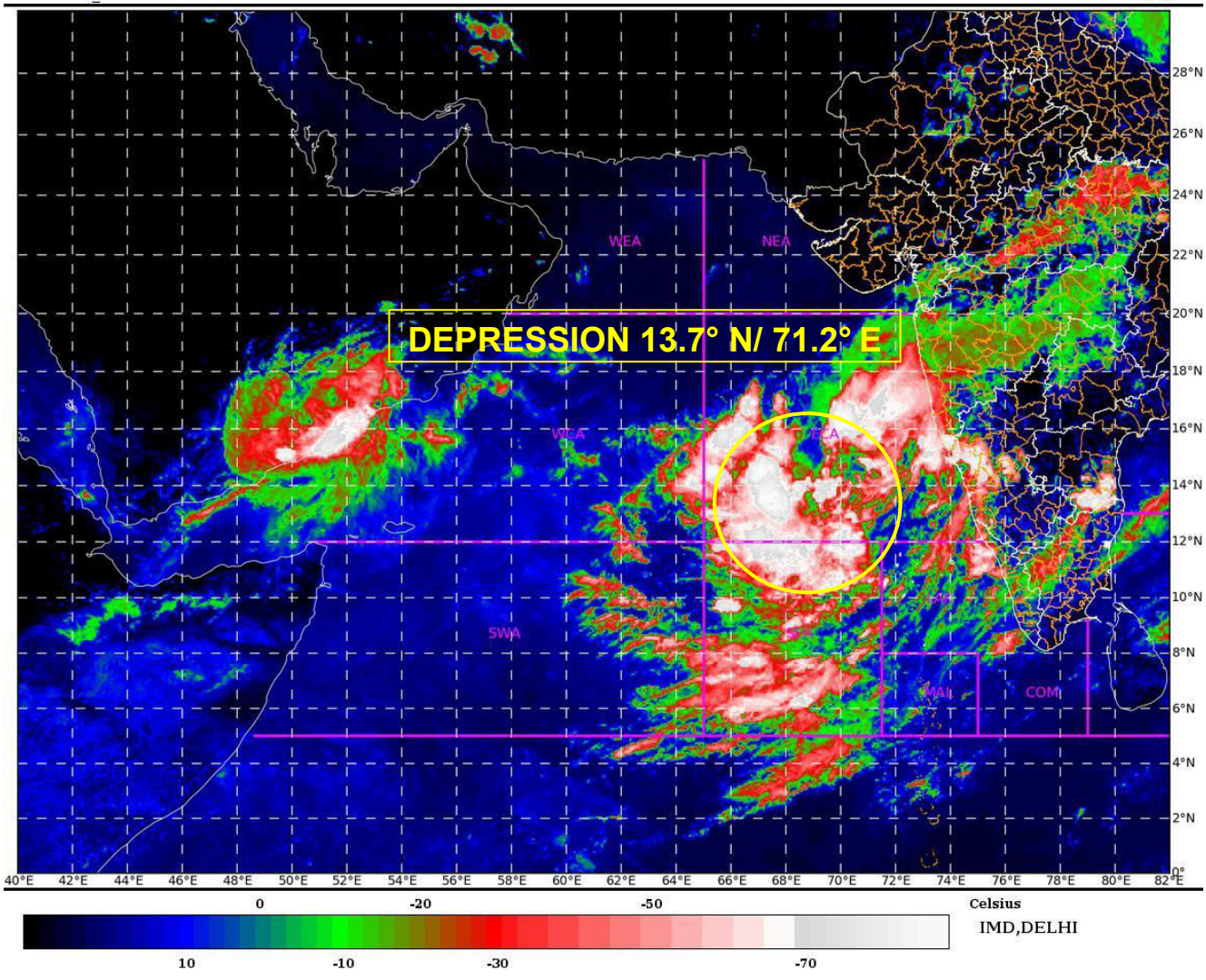
(SUNITHA DEVI)

SCIENTIST- E, RSMC, NEW DELHI

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

SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

01-06-2020/(0800 to 0827) GMT
01-06-2020/(1330 to 1357) IST



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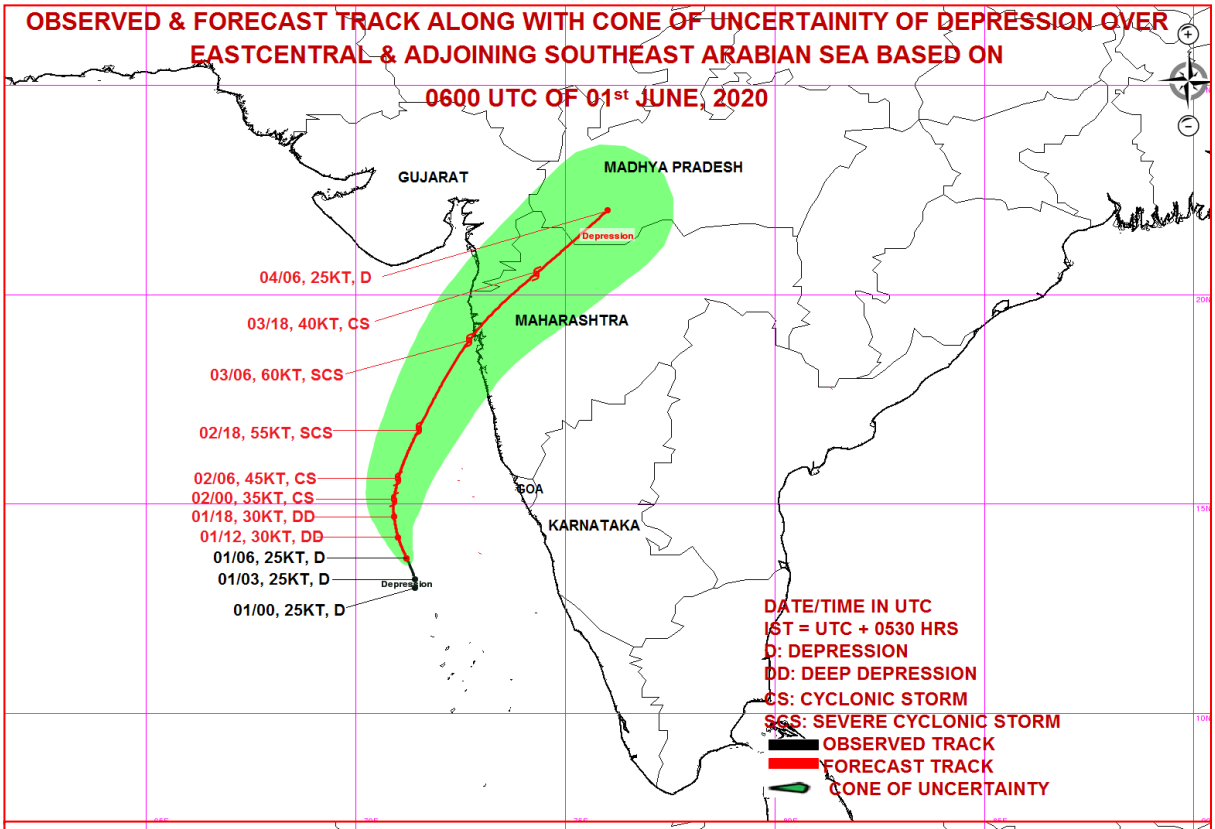

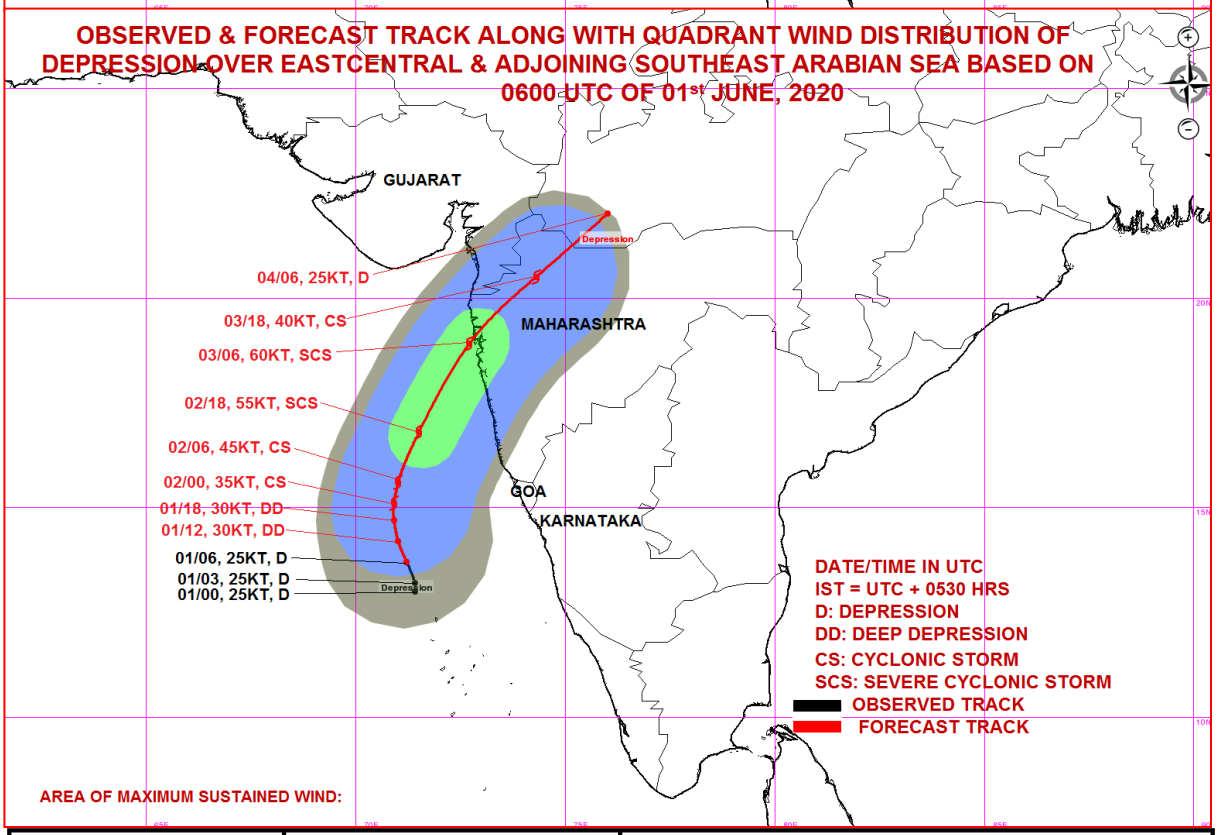

MSW(knot)/kmph)	Impact	Action
28-33 /(52–61)	Very rough seas.	Total suspension of fishing operations
34-40/(62-74)	High to very high seas	Total suspension of fishing operations
41-63/(75-117)	Very High seas	Total suspension of fishing operations

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