REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 02.06.2020

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0630 UTC OF 02.06.2020 BASED ON 0300 UTC OF 02.06.2020.

SUB: DEEP DEPRESSION OVER EASTCENTRAL ARABIAN SEA

THE **DEEP DEPRESSION** OVER EASTCENTRAL ARABIAN SEA MOVED NORTHWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0300UTC OF TODAY, THE 02ND JUNE, 2020 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 15.3°N AND LONGITUDE 71.2°E, ABOUT 280 KM WEST OF PANJIM (43192), 450 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 670 KM SOUTH-SOUTHWEST OF SURAT (42840).

IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 06 HOURS AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT FEW HOURS, RECURVE NORTH-NORTHEASTWARDS THEREAFTER AND CROSS NORTH MAHARASHTRA AND ADJOINING SOUTH GUJARAT COAST BETWEEN HARIHARESHWAR AND DAMAN(42916), **CLOSE TO ALIBAG (RAIGAD DISTRICT, MAHARASHTRA STATE) AROUND 0900 UTC OF 03RD JUNE AS A SEVERE CYCLONIC STORM WITH A MAXIMUM SUSTAINED WIND SPEED OF 100-110 KMPH GUSTING TO 120 KMPH.**

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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
02.06.20/0300	15.3/71.2	55-65 GUSTING TO 75	DEEP DEPRESSION
02.06.20/0600	15.5/71.3	60-70 GUSTING TO 90	CYCLONIC STORM
02.06.20/1200	16.0/71.5	70-80 GUSTING TO 90	CYCLONIC STORM
02.06.20/1800	16.6/71.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
03.06.20/0000	17.4/72.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03.06.20/1200	19.2/73.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.06.20/0000	20.6/74.6	50-60 GUSTING TO 70	DEEP DEPRESSION
04.06.20/1200	22.2/76.3	35-45 GUSTING TO 55	DEPRESSION

AS PER INSAT-3D SATELLITE IMAGERY BASED ON 0300 UTC OF 02nd JUNE, THE INTENSITY OF THE SYSTEM INTENSITY IS 2.0. THE SYSTEM HAS BEEN WELL ORGANISED IN LAST 3-HOURS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OBSERVED OVER EASTCENTRAL ARABIAN SEA BETWEEN LATITUDE 11.1N TO 18.0N AND LONGITUDE 66.0E TO 74.5E. MINIMUM CLOUD TOP TEMPERATURE (CTT) IS MINUS 93°C.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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 1000 HPA.

AT 0300 UTC OF 02nd JUNE, A BOUY (23451) LOCATED AT 15.0°N/69.0°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1004.6 HPA. ANOTHER BOUY LOCATED AT 12.0°N/68.0°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1006.4 HPA AND MEAN SURFACE WIND SPEED OF 320°/21.4 KNOTS.

STORM SURGE GUIDANCE

STORM SURGE OF ABOUT 1-2 METERS HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF MUMBAI UP TO ABOUT 1 TO 1.5 KM, THANE AND RAIGAD DISTRICTS AND 0.5-1 METER HEIGHT ABOVE THE ASTRONOMICAL TIDE LIKELY TO INUNDATE LOW LYING AREAS OF RATNAGIRI DISTRICT DURING THE TIME OF LANDFALL.

REMARKS:

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.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER EASTCETNRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS 100-120 KJ/CM^2 OVER EASTCENTRAL ARABIAN SEA AND BECOMING 80-100 KJ/CM^2 NEAR KARNATAKA, MAHARASHTRA AND GUJARAT COAST.

THE LOWER LEVEL VORTICITY NOW LIES AROUND THE SYSTEM CENTER AND HAVE INCREASED TO ABOUT 150 X10^{-5} SEC^{-1} OVER EASTCENTRAL ARABIAN SEA. THE LOWER LEVEL CONVERGENCE HAVE ALSO INCREASED TO 40X10^{-5} SEC^{-1} OVER THE SYSTEM CENTER DURING THE SAME PERIOD FROM 10X10^{-5} SEC^{-1}. THE UPPER LEVEL DIVERGENCE HAVE INCREASED TO 40X10^{-5} SEC^{-1} AROUND THE SYSTEM CENTER. VERTICAL WIND SHEAR (VWS) IS NOW LOW MODERATE (10-15 KTS) AROUND THE SYSTEM CENTRE AND IS MODERATE (20-30 KTS) ALONG THE FORECAST TRACK. ALL THESE ENVIRONMENTAL AND DYNAMICAL CONDITIONS HIGHLY FAVOURING ITS INTENSIFICATION INTO A CYCLONIC STORM DURING NEXT 6-HOURS.

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. UNDER FAVOURABLE ENVIRONMENTAL CONDITIONS LIKE LOW TO MODERATE 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 CYCLONIC STORM OVER EASTCENTRAL ARABIAN SEA DURING NEXT 06 HOURS AND **INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING THE SUBSEQUENT 12 HOURS**. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS FOR NEXT FEW HOURS AND THEN RECURVE NORTH-NORTHEASTWARDS THEREAFTER AND AND CROSS NORTH MAHARASHTRA AND ADJOINING SOUTH GUJARAT COAST BETWEEN HARIHARESHWAR AND DAMAN(42916), **CLOSE TO ALIBAG (RAIGAD DISTRICT, MAHARASHTRA) AROUND 0900 UTC OF 03RD JUNE AS A SEVERE CYCLONIC STORM.**

(DR RK JENAMANI)
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NEW DELHI

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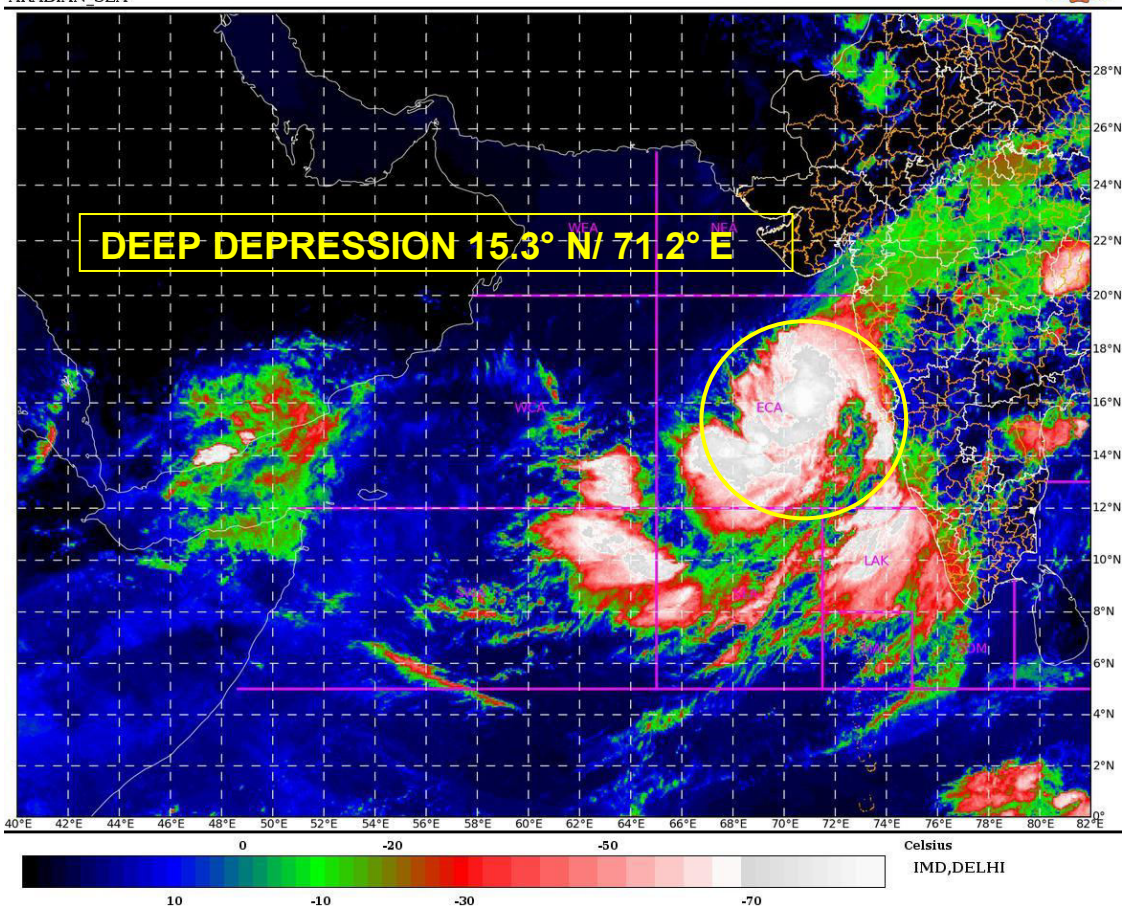
SAT : INSAT-3D IMG
IMG_TIR1_TEMP 10.8 um
ARABIAN_SEA

02-06-2020/(0530 to 0557) GMT
02-06-2020/(1100 to 1127) IST



Celsius
IMD,DELHI

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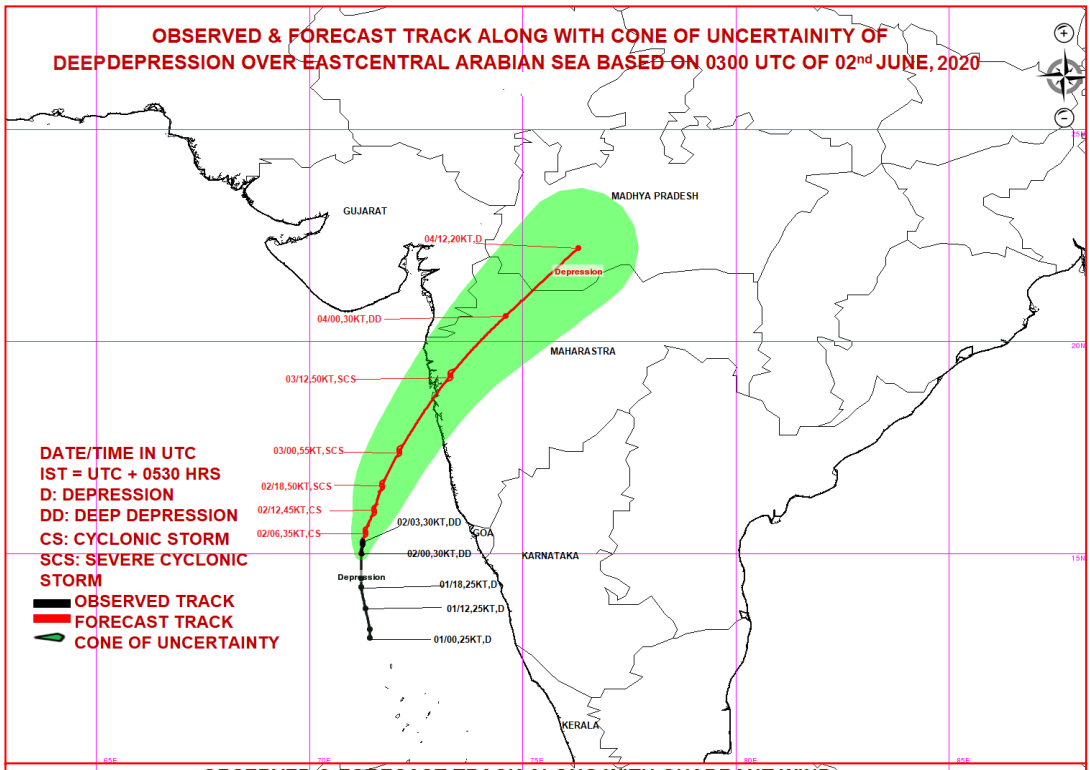

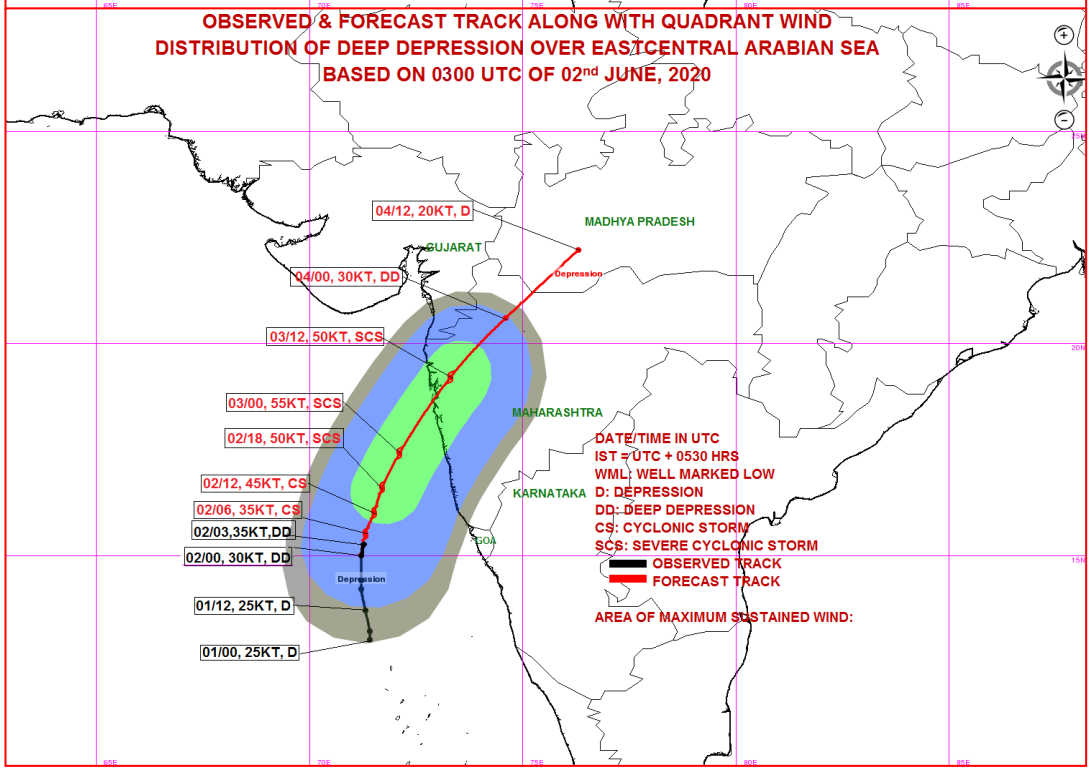

MSW(knot)/kmph)	Impact	Action
28-33 /(52–61)	Very rough seas.	Total suspension of fishing operations
34-40/(62-74)	High to very high seas	Total suspension of fishing operations
41-63/(75-117)	Very High seas	Total suspension of fishing operations

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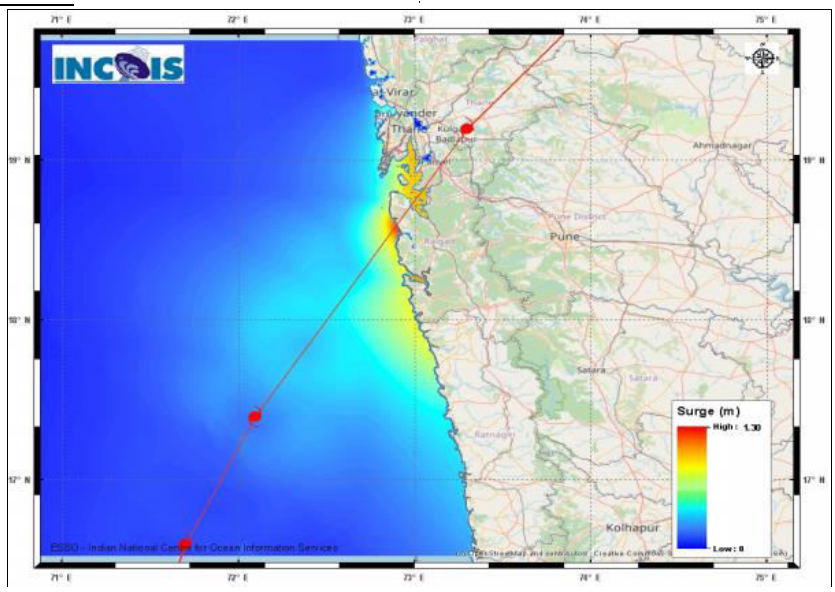

STORM SURGE HEIGHT INFORMATION:

* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	* STORM SURGE (m)	* EXPECTED INUNDATION EXTENT (km)
ALIBAG	RAIGAD	MAHARASHTRA	ALIBAG	0.5-1.3	Around 1.4
PEN	RAIGAD	MAHARASHTRA	PEN	0.5-1.0	Around 1.0
THANE	GREATER BOMBAY	MAHARASHTRA	THANE	0.5-1.0	Around 0.2
DAPOLI	RATNAGIRI	MAHARASHTRA	DAPOLI	0.5-0.8	Around 0.1
VASAI	THANE	MAHARASHTRA	VASAI	0.5-0.7	Around 1.1

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