



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.11.2020

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 21.11.2020 BASED ON 0300 UTC OF 21.11.2020 .

BAY OF BENGAL:

UNDER THE INFLUENCE OF YESTERDAY'S CYCLONIC CIRCULATION OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY OF BENGAL (BOB), A **LOW PRESSURE AREA HAS FORMED OVER EQUATORIAL INDIAN OCEAN AND ADJOINING CENTRAL PARTS OF SOUTH BOB IN THE MORNING (0300 UTC) OF TODAY, THE 21ST NOVEMBER.** IT IS LIKELY TO CONCENTRATE INTO A DEPRESSION OVER SOUTHWEST BOB DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS SRILANKA-TAMILNADU COASTS DURING SUBSEQUENT 48 HOURS AND REACH TAMILNADU & PUDUCHERRY COAST ON 25TH NOVEMBER, 2020.

BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY OF BENGAL, BETWEEN LATITUDE 2.0°N & 10.0°N AND LONGITUDE 83.0°E & 93.0°E IN ASSOCIATION WITH THE LOW PRESSURE AREA. MINIMUM CLOUD TOP TEMPERATURE IS -93.0°C. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL, SOUTH OF LATITUDE 10.0°N, SOUTH ANDAMAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER EASTCENTRAL BAY OF BENGAL, REST OF ANDAMAN SEA.

PROBABILITY OF CYCLOGENESIS(FORMATION OF DEPRESSION) DURING NEXT 120 HRS:


24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	MOD	HIGH	HIGH	HIGH

ARABIAN SEA:

YESTERDAY'S LOW PRESSURE AREA OVER CENTRAL PARTS OF SOUTH ARABIAN SEA LAY AS A **WELL MARKED LOW PRESSURE AREA OVER SOUTHWEST ARABIAN SEA (AS) AND NEIGHBOURHOOD IN THE EARLY MORNING (0000 UTC) AND PERSISTED OVER THE SAME REGION AT 0300 UTC OF TODAY, THE 21ST NOVEMBER, 2020.** IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION DURING NEXT 24 HOURS.

AS PER SATELLITE IMAGERY, THE INTENSITY OF THE SYSTEM IS T 1.0. BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE

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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CONVECTION LAY OVER SOUTHWEST & ADJOINING WESTCENTRAL AS BETWEEN LATITUDE 8.0°N & 14.0°N AND LONGITUDE 56.0°E & 64.0°E IN ASSOCIATION WITH THE SYSTEM. THE MINIMUM CLOUD TOP TEMPERATURE IS -93°C. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH & WESTCENTRAL ARABIAN SEA, COMORIN. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTH ADJOINING CENTRAL ARABIAN SEA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS :

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
LOW	MODERATE	HIGH	NIL	NIL

REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 3 WITH AMPLITUDE EQUAL TO 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE BECOMING LESS THAN 1 DURING SUBSEQUENT 4 DAYS. THUS MJO WILL SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE NORTH INDIAN OCEAN INCLUDING BAY OF BENGAL (BOB) AND ARABIAN SEA (AS) FOR NEXT 5 DAYS.

ARABIAN SEA:

CONSIDERING THE SEA CONDITIONS, SEA SURFACE TEMPERATURE (SST) IS AROUND 29-30°C OVER MOST PARTS OF SOUTH AND EASTCENTRAL ARABIAN SEA (AS). IT IS SLIGHTLY LESS (26-28°C) OVER WESTCENTRAL & NORTH AS. HIGH TCHP (100-120 KJ/CM²) PREVAILS OVER COMORIN AREA AND ADJOINING SOUTHWEST BOB OFF SOUTH SRI LANKA COAST AND KERALA COAST. TCHP IS AROUND 60-80 KJ/CM² OVER MAJOR PARTS OF SOUTH AS EXCEPT OFF NORTH SOMALIA COAST. TCHP IS LESS THAN 50 KJ/CM² TO THE WEST OF 68°E AND NORTH 11°N OVER THE CENTRAL & NORTH AS AND 60 – 80 KJ/CM² OVER REMAINING PARTS OF EASTCENTRAL & NORTHEAST AS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS **OVER AS**, TWO FRAGMENTED POSITIVE RELATIVE VORTICITY ZONES (25-50X10⁻⁶S⁻¹) PREVAIL OVER SOUTHWEST AS AND ANOTHER (20-30X10⁻⁶S⁻¹) PREVAILS OVER SOUTHWEST & ADJOINING SOUTHEAST AS WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. TWO AREAS OF POSITIVE DIVERGENCE 10X10⁻⁵S⁻¹ & 20X10⁻⁵S⁻¹ PREVAIL OVER SOUTHWEST AS. ANOTHER 30X10⁻⁵S⁻¹ PREVAILS OVER SOUTHWEST AS. AREA OF POSITIVE CONVERGENCE ZONE (20 X 10⁻⁵S⁻¹) PREVAILS OVER SOUTHWEST AS. THE VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (5-20 KTS) OVER CENTRAL PARTS OF AS AND ADJOINING SOUTH AS. THE UPPER TROPOSPHERIC RIDGE AT 200 HPA RUNS ALONG 15°N OVER THE AS.

MODELS LIKE IMD GFS, NCEP GFS, ECMWF, NCUM AND NEPS ARE INDICATING DEVELOPMENT OF A DEPRESSION OVER SOUTHWEST AS AROUND 22ND. HOWEVER, ALL THE MODELS ARE UNANIMOUS ABOUT WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH SOMALIA COAST AND THEN INTO GULF OF ADEN. MODELS ARE UNANIMOUS ABOUT INTENSIFICATION UPTO DEPRESSION STAGE ONLY.

BAY OF BENGAL:

CONSIDERING THE SEA CONDITIONS, SST IS AROUND 29-30°C OVER MOST PARTS OF BAY OF BENGAL (BOB). HIGH TCHP (120-140 KJ/CM²) PREVAILS IN THE NEAR EQUATORIAL BELT OF NORTH INDIAN OCEAN (NIO) AND ADJOINING SOUTH BOB & SUMATRA COAST. HIGHER TCHP (120-140 KJ/CM²) ALSO PREVAIL OFF MYANMAR

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COAST AND NORTH ANDHRA PRADESH COAST (INDIA). TCHP IS 60-80 KJ/CM² OVER REMAINING PARTS OF BOB AND ANDAMAN SEA.

CONSIDERING THE ENVIRONMENTAL CONDITIONS **OVER BOB**, POSITIVE RELATIVE VORTICITY ($20-50 \times 10^{-6} \text{S}^{-1}$) PREVAILS OVER EQUATORIAL INDIAN OCEAN & ADJOINING CENTRAL PARTS OF SOUTH BOB WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. AREA OF POSITIVE DIVERGENCE ($30 \times 10^{-5} \text{S}^{-1}$) PREVAILS OVER EQUATORIAL INDIAN OCEAN & ADJOINING CENTRAL PARTS OF SOUTH BOB. AREA OF POSITIVE CONVERGENCE ZONE ($05-10 \times 10^{-5} \text{S}^{-1}$) PREVAILS OVER THE SAME REGION. THE VERTICAL WIND SHEAR (VWS) IS MODERATE (10-20 KTS) OVER SOUTH AND ADJOINING CENTRAL BOB. THE UPPER TROPOSPHERIC RIDGE AT 200 HPA RUNS ALONG 11.5°N OVER THE BOB.

MODELS LIKE ECMWF, IMD GFS, NCEP GFS, GEFS, NCUM AND NEPS ARE INDICATING DEVELOPMENT OF DEPRESSION OVER SOUTHWEST BOB AROUND 23RD/24TH NOVEMBER WITH LIKELY MOVEMENT TOWARDS SRILANKA-TAMIL NADU COASTS. HOWEVER THERE IS LARGE VARIATION W.R.T. INTENSIFICATION OF THE SYSTEM.

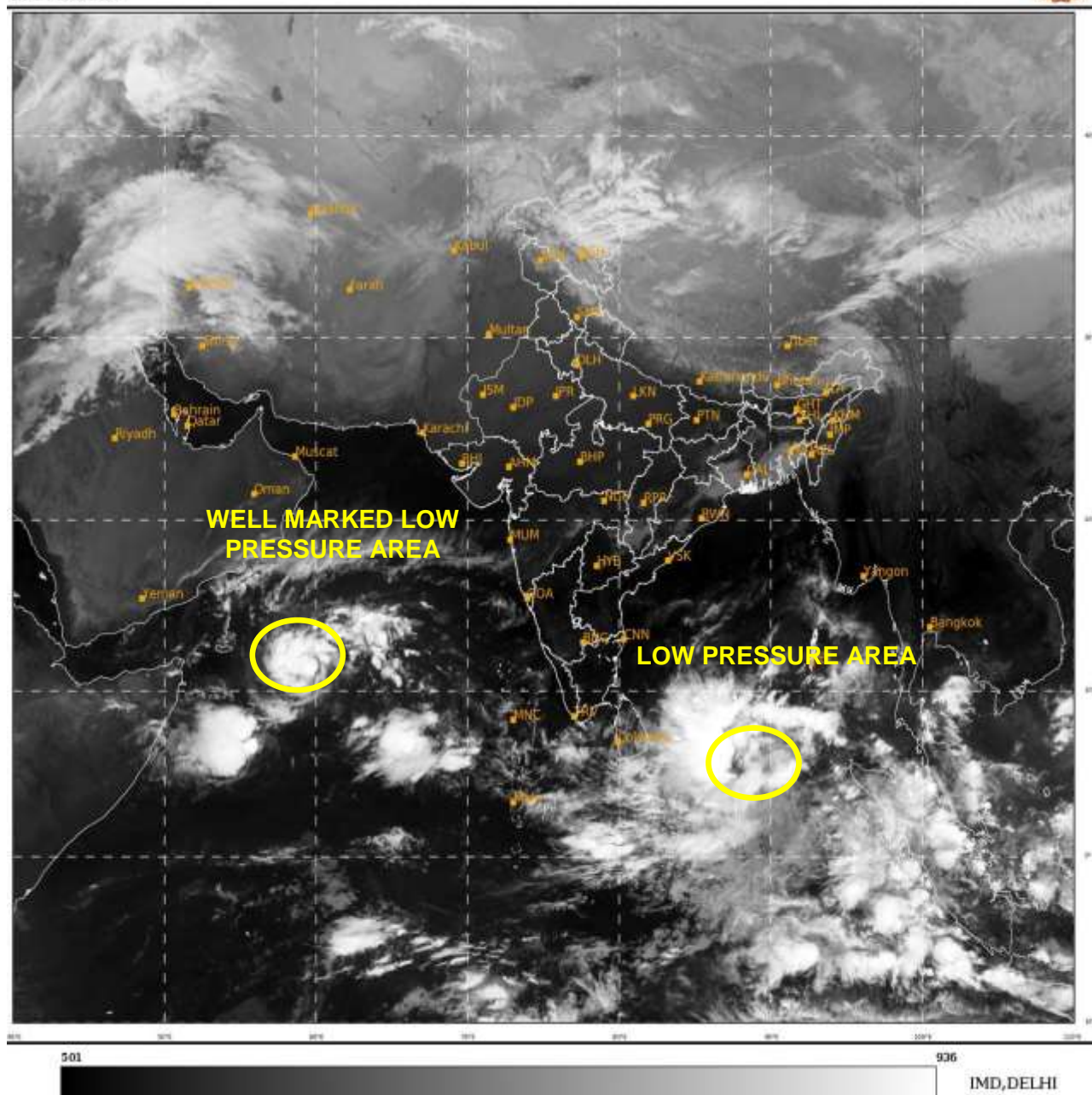
CONCLUSION:

CONSIDERING ALL THE ABOVE, THE EXISTING WELL MARKED LOW PRESSURE AREA OVER CENTRAL PARTS OF SOUTH AS IS EXPECTED TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY INTO A DEPRESSION OVER THE SOUTHWEST AS DURING NEXT 24 HOURS. AND THE EXISTING LOW PRESSURE AREA OVER EQUATORIAL INDIAN OCEAN & ADJOINING CENTRAL PARTS OF SOUTH BOB IS LIKELY TO CONCENTRATE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS SRILANKA-TAMILNADU COASTS DURING SUBSEQUENT 48 HOURS AND REACH TAMILNADU & PUDUCHERRY COAST ON 25TH NOVEMBER, 2020.



SAT : INSAT-3D IMG
IMG_TIR1 10.8 um
LIC Mercator

21-11-2020(0300 to 0327) GMT
21-11-2020(0830 to 0857) IST



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