



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 31.07.2023**

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 0600 UTC OF 31.07.2023 BASED ON 0300 UTC OF 31.07.2023.**

**BAY OF BENGAL:**

YESTERDAY'S LOW PRESSURE AREA OVER NORTHWEST BAY OF BENGAL AND ADJOINING ODISHA & WEST BENGAL COASTS LAY AS WELL MARKED LOW PRESSURE AREA OVER CENTRAL PARTS OF NORTH BAY OF BENGAL AT 0000 UTC AND PERSISTED OVER THE SAME REGION AT 0300 UTC OF TODAY, THE 31<sup>ST</sup> JULY 2023. IT IS LIKELY TO MOVE GRADUALLY NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION DURING NEXT 12 HOURS.

AS PER INSAT-3D IMAGERY, THE WELL MARKED LOW PRESSURE AREA (WML) IS CENTERED WITHIN HALF A DEGREE OF 18.5°N / 91.2°E. INTENSITY OF THE SYSTEM IS T1.0. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH ADJOINING CENTRAL BAY OF BENGAL. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUM.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH & CENTRAL BAY OF BENGAL, ARAKAN COAST, NORTH ANDAMAN SEA, GULF OF MARTABAN AND TENASSERIM COAST. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL AND SOUTH ANDAMAN SEA.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 15-20 KNOTS GUSTING TO 25 KNOTS. ESTIMATED CENTRAL PRESSURE IS 994 HPA. SEA CONDITION IS LIKELY TO BE ROUGH OVER NORTH BOB AND ADJOINING EASTCENTRAL BOB.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
LOW	LOW	NIL	NIL	NIL	NIL	NIL

**ARABIAN SEA:**

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK CONVECTION LAY OVER NORTH & EAST ARABIAN SEA, LAKSHADWEEP ISLAND AREA AND COMORIN AREA.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:**

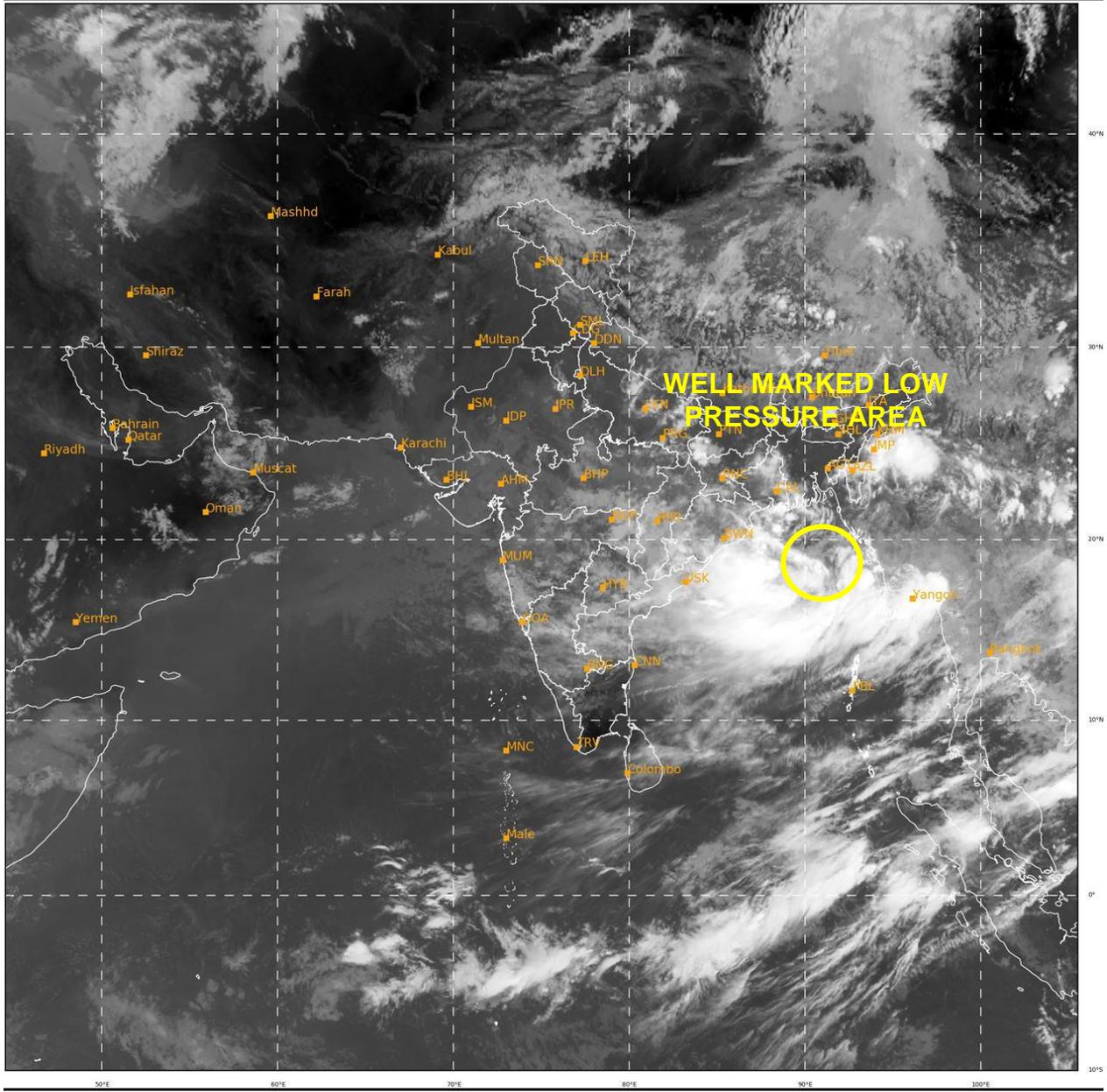
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

## REMARKS:

MADDEN JULIAN OSCILLATION IS IN PHASE 8 WITH AMPLITUDE LESS THAN 1 AND WOULD MOVE TO PHASE 1 FROM 1<sup>ST</sup> AUGUST ONWARDS WITH AMPLITUDE REMAINING LESS THAN 1. IT WOULD CONTINUE IN SAME PHASE DURING NEXT 4-5 DAYS. HENCE MJO IS NOT LIKELY TO SUPPORT CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL (BOB). HOWEVER, EQUATORIAL WAVES INDICATE WESTERLY WINDS (1-3 MPS) OVER CENTRAL & SOUTH BOB AND EASTERLY WINDS (1-3 MPS) OVER NORTH BOB, ALONG WITH PRESENCE OF ROSSBY WAVES OVER CENTRAL BOB. THUS EQUATORIAL WAVES ARE LIKELY TO SUPPORT CYCLOGENESIS OVER THE BOB REGION. TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE CORE AND AROUND THE SYSTEM AREA. SEA SURFACE TEMPERATURE IS AROUND 29°C OVER NORTH BOB, BECOMING 30°C OFF NORTH ODISHA & ADJOINING GANGETIC WEST BENGAL COASTS. THE LOW LEVEL VORTICITY IS AROUND  $150 \times 10^{-6} \text{S}^{-1}$  OVER EASTCENTRAL BOB TO THE SOUTHEAST OF SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS ABOUT  $20 \times 10^{-5} \text{S}^{-1}$  TO THE SOUTHWEST AND SOUTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND  $30 \times 10^{-5} \text{S}^{-1}$  TO THE SOUTHWEST OF SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE ABOUT 10-15 KNOTS AROUND SYSTEM AREA AND 15-20 KNOTS ALONG THE EXPECTED TRACK. ALL THESE ENVIRONMENTAL FEATURES SUGGEST THAT THE SYSTEM IS IN A MODERATELY FAVOURABLE ENVIRONMENT.

VARIOUS DETERMINISTIC MODELS INCLUDING ECMWF, NCUM AND NEPS ARE INDICATING A WELL MARKED LOW PRESSURE AREA (WML)/ LOW PRESSURE AREA (LPA) OVER CENTRAL PARTS OF NORTH BOB. HOWEVER, GFS IS INDICATING DEPRESSION OVER NORTHEAST BOB ON 31<sup>ST</sup> JULY WITH GRADUAL WEAKENING FROM TOMORROW ONWARDS & NORTHWESTWARDS MOVEMENT. ECMWF AND NCUM ARE INDICATING DEPRESSION OVER NORTHWEST BOB & ADJOINING GANGETIC WEST BENGAL ON 2<sup>ND</sup> AUGUST. THUS, PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) IS TAKEN AS LOW ON DAY-1 AND DAY-2 DURING NEXT 48 HOURS.

Legends: IMD GFS: India Meteorological Department Global Forecast System, NCUM: National Centre for Medium Range Weather Forecasting Centre (NCMRWF) Unified Model, ECMWF: European Centre for Medium Range Weather Forecasting, National Centre for Environment Prediction GFS (NCEP GFS)



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IMD, DELHI