



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 08.05.2023

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0700 UTC OF 08.05.2023 BASED ON 0300 UTC OF 08.05.2023.

BAY OF BENGAL:

SUB: LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA

YESTERDAY'S CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA LAY AS A LOW PRESSURE AREA FORMED OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA AT 0300 UTC OF TODAY, THE 8TH MAY 2023. IT IS LIKELY TO INTENSIFY INTO A DEPRESSION ON 9TH MAY OVER THE SAME REGION AND FURTHER INTO A CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND ADJOINING AREAS OF EAST CENTRAL BAY OF BENGAL AND ANDAMAN SEA ON 10TH MAY. IT IS LIKELY TO MOVE INITIALLY NORTH-NORTHWESTWARDS TOWARDS EASTCENTRAL BAY OF BENGAL TILL 11TH MAY. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY AND MOVE NORTH-NORTHEASTWARDS TOWARDS BANGLADESH-MYANMAR COASTS.

LATEST SATELLITE IMAGERY INDICATES A LOW LEVEL CIRCULATION CENTRE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL AND SOUTH ANDAMAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTH ANDAMAN SEA AND ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTH AND CENTRAL BAY OF BENGAL. ASCAT PASS AT 1443 UTC OF 7TH MAY IS INDICATING MAXIMUM SUSTAINED WIND SPEED OF 15-20 KNOTS PREVAILING OVER THE SOUTH ANDAMAN SEA REGION. STRONG WINDS ARE SEEN IN THE EASTERN SECTOR AND SOUTHERN SECTOR. STRONGER WINDS IN THE SOUTHERN SECTOR INDICATE INCREASED CROSS EQUATORIAL FLOW, WHICH WILL ALSO FAVOUR CYCLOGENESIS BY INCREASING VORTICITY AND CONVERGENCE OVER THE REGION. THESE FEATURES INDICATE LIKELY STRENGTHENING OF SYSTEM.

CONSIDERING THE SURFACE OBSERVATIONS, ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 10-15 KTS. THE ESTIMATED CENTRAL PRESSURE OVER THE SYSTEM AREA IS 1006 HPA. THERE IS A FALLING TENDENCY OF MEAN SEA LEVEL PRESSURE OVER ANDAMAN & NICOBAR ISLANDS (1-2 HPA BELOW NORMAL).

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	HIGH	HIGH	HIGH	HIGH

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER COMORIN AREA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER CENTRAL & SOUTHEAST ARABIAN SEA & LAKSHADWEEP ISLAND AREAS.

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	NIL	NIL	NIL	NIL

REMARKS:

THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE DURING NEXT 3 DAYS. THUS, MJO PHASE IS HIGHLY CONDUCTIVE FOR ENHANCED CONVECTION OVER THE BAY OF BENGAL (BOB) DURING NEXT 3-4 DAYS. EASTERLY WINDS (1-3 MPS) ARE LIKELY TO PREVAIL OVER SOUTH ANDAMAN SEA AND SOUTH BOB IN THE LOWER TROPOSPHERIC LEVELS ON 8TH. THEREAFTER, THE WESTERLY WINDS ARE LIKELY TO PREVAIL OVER THE SOUTH BOB AND SOUTH ANDAMAN SEA WITH EASTERLY WINDS OVER CENTRAL & NORTH BOB FROM 9TH MAY ONWARDS. THUS, THE EQUATORIAL WAVES AND MJO ARE LIKELY TO COLLECTIVELY CONTRIBUTE TOWARDS ENHANCEMENT OF CONVECTIVE ACTIVITY AND HENCE CYCLOGENESIS OVER SOUTH BOB AROUND 9TH MAY ONWARDS.

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM² OVER MAJOR PARTS OF SOUTH ANDAMAN SEA & ADJOINING SOUTHEAST BOB AND CENTRAL BOB. IT IS INDICATING DECREASING TENDENCY ABOUT 60-70 KJ/CM² ALONG THE EAST COAST OF INDIA & ALONG MYANMAR COAST. SEA SURFACE TEMPERATURE (SST) IS AROUND 30-32°C OVER ENTIRE BOB. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCTIVE FOR CYCLOGENESIS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE LOW LEVEL VORTICITY AT 850 HPA HAS ORGANISED AND INCREASED TO $100 \times 10^{-6} \text{S}^{-1}$ OVER SOUTH ANDAMAN SEA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE HAS ORGANISED AND INCREASED FURTHER DURING PAST 24 HOURS AND IS AROUND $30 \times 10^{-5} \text{S}^{-1}$ OVER SOUTH ANDAMAN SEA. UPPER LEVEL DIVERGENCE IS $20 \times 10^{-5} \text{S}^{-1}$ OVER SOUTH ANDAMAN SEA AND ADJOINING SOUTHEAST BOB. EQUATORWARD OUTFLOW IS SEEN IN UPPER LEVELS. THE SEA CONDITIONS AND ENVIRONMENTAL FEATURES INDICATE FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS OVER THE REGION. THE UPPER TROPOSPHERIC RIDGE AT 500 HPA IS LOCATED NEAR 15.0N. THE RIDGE LOCATION INDICATES THAT THE SYSTEM WOULD MOVE INITIALLY NORTH-NORTHWESTWARDS AND THEN RECURVE GRADUALLY NORTH-NORTHEASTWARDS.

CONSIDERING THE MODEL GUIDANCE, IMD GFS IS INDICATING DEPRESSION ON 9TH OVER SOUTHEAST & ADJOINING SOUTH ANDAMAN SEA WITH INTENSIFICATION INTO CYCLONIC STORM (CS) ON 10TH. PEAK INTENSIFICATION IS INDICATED UPTO VERY SEVERE CYCLONIC STORM (VSCS) STAGE. IT IS INDICATING INITIAL NORTH-NORTHWESTWARDS MOVEMENT TILL 11TH AND GRADUAL NORTH-NORTHEASTWARDS RECURVATURE THEREAFTER. LANDFALL IS INDICATED AROUND 14/0000 UTC OVER BANGLADESH-MYANMAR COASTS NEAR 21.3N/92.5E. ECMWF IS INDICATING DEPRESSION AROUND 10TH MAY AND RAPID

INTENSIFICATION INTO SEVERE CYCLONIC STORM ON 11TH MAY. IT IS ALSO INDICATING INITIAL NORTH-NORTHWESTWARDS MOVEMENT TILL 11TH AND NORTH-NORTHEASTWARDS RECURVATURE THEREAFTER. CROSSING IS INDICATED ON 15TH OVER BANGLADESH-MYANMAR COASTS NEAR 23.3N/91.5E. IMD MME (IMD GFS & NCEP GFS BASED) IS INDICATING SIMILAR INTENSIFICATION AND MOVEMENT WITH CROSSING OVER MYANMAR COAST NEAR 16.2/94.2E.

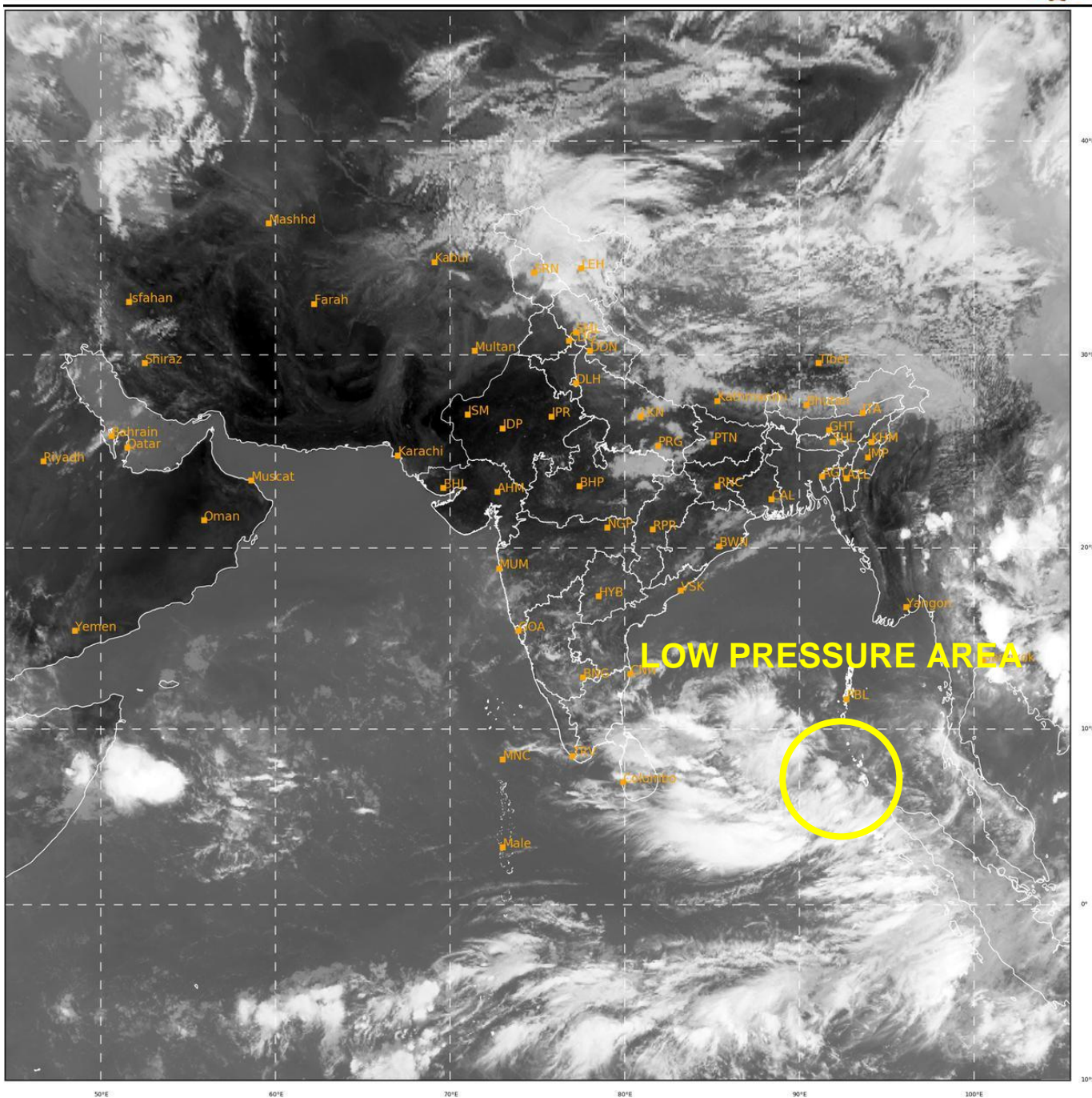
CURRENT INFERENCE IS BASED UPON THE SYNOPTIC ANALYSIS, ENVIRONMENTAL FEATURES AND GUIDANCE FROM GFS GROUP, ECMWF AND IMD MME MODELS.

HENCE TO CONCLUDE, A DEPRESSION IS LIKELY TO FORM OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA ON 9TH MAY. IT IS LIKELY TO FURTHER INTENSIFY INTO A CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND ADJOINING AREAS OF EASTCENTRAL BAY OF BENGAL AND ANDAMAN SEA ON 10TH MAY. IT IS LIKELY TO MOVE INITIALLY NORTH-NORTHWESTWARDS TOWARDS EASTCENTRAL BAY OF BENGAL TILL 11TH MAY. THEREAFTER, IT IS LIKELY TO RECURVE GRADUALLY AND MOVE NORTH-NORTHEASTWARDS TOWARDS BANGLADESH-MYANMAR COASTS.

(M. SHARMA)
SCIENTIST-D
RSMC NEW DELHI

SAT : INSAT-3D IMG
IMG_TIR1 10.8 um
L1C Mercator

08-05-2023/(0630 to 0656) GMT
08-05-2023/(1200 to 1226) IST



238

945

IMD, DELHI

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