



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 02.10.2024

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 02.10.2024 BASED ON 0300 UTC OF 02.10.2024.

BAY OF BENGAL:

AN UPPER AIR CYCLONIC CIRCULATION FORMED OVER NORTH ANDAMAN SEA AND ADJOINING SOUTH MYANMAR COAST AT 0000 UTC AND LAY OVER SOUTHEAST BANGLADESH & NEIGHBOURHOOD AT 0300 UTC OF TODAY, THE 02ND OCTOBER. IT EXTENDED UPTO 5.8 KM ABOVE MEAN SEA LEVEL. AT 0300 UTC, A TROUGH RAN FROM THE CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH & NEIGHBOURHOOD TO NORTH ANDAMAN SEA ACROSS MYANMAR COAST AND EXTENDED UPTO 1.5 KM ABOVE MEAN SEA LEVEL.

UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER NORTH BAY OF BENGAL & NEIGHBOURHOOD AROUND 04TH OCTOBER.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH & EASTCENTRAL BAY OF BENGAL, NORTH ANDAMAN SEA, GULF OF MARTABAN, TENASSERIM COAST AND ARAKAN COAST (MINIMUM CLOUD TOP TEMPERATURE (CTT) MINUS 75⁰-93⁰C). SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER WESTCENTRAL & SOUTHEAST BAY OF BENGAL AND SOUTH ANDAMAN SEA.

***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

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

ARABIAN SEA:

YESTERDAY'S CYCLONIC CIRCULATION OVER COMORIN AREA & ADJOINING EQUATORIAL INDIAN OCEAN LAY OVER MALDIVES & NEIGHBOURHOOD WITH EXTENSION UPTO 4.5 KM ABOVE MEAN SEA LEVEL AT 0300 UTC OF TODAY, THE 02ND OCTOBER, 2024.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST & EASTCENTRAL ARABIAN SEA LAKSHADWEEP ISLANDS AREA, MALDIVES & COMORIN AREA ADJOINING EQUATORIAL INDIAN OCEAN (MINIMUM CTT MINUS 75⁰-90⁰C). SCATTERED LOW AND MEDIUM CLOUDS WITH

EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER REST OF ARABIAN SEA.

***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

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

REMARKS:

THE MADDEN-JULIAN OSCILLATION (MJO) IS CURRENTLY IN PHASE 2, WITH AN AMPLITUDE CLOSE TO 1, AND IS EXPECTED TO CONTINUE IN SAME PHASE DURING NEXT 4 TO 5 DAYS. THUS, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE ARABIAN SEA (AS). CNCS MODEL GUIDANCE REGARDING EQUATORIAL WAVES INDICATE STRONG (7-9 MPS) EASTERLY WIND ANOMALY OVER THE SOUTH BAY OF BENGAL (BOB) AND ARABIAN SEA (AS) AND SOUTHERN PENINSULAR INDIA. WESTERLY WIND ANOMALY (5-7 MPS) OVER CENTRAL AS AND (3-5 MPS) OVER CENTRAL BOB IS INDICATED. EQUATORIAL WAVES ARE NOT LIKELY TO CONTRIBUTE TO ENHANCEMENT OF ANY CONVECTIVE ACTIVITY OVER THE AS AND BOB.

BAY OF BENGAL (BOB)

IN THE BAY OF BENGAL, THE SEA SURFACE TEMPERATURE (SST) MORE THAN 28°C OVER ENTIRE PARTS OF THE REGION. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS GREATER THAN 100 KJ/CM² OVER THE NORTHERN AND WESTCENTRAL BOB AND OFF THE COASTS OF NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH, WHILE IT IS BELOW 50 KJ/CM² IN THE REST OF THE BOB AND THE ANDAMAN SEA. A ZONE OF POSITIVE LOW-LEVEL VORTICITY (30-40 X10⁻⁵ S⁻¹) IS SEEN OVER IRRAWADY DELTA OFF SOUTH MYANMAR COAST WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW-LEVEL CONVERGENCE HAS INCREASED SIGNIFICANTLY IN PAST 24 HOURS AND IS AROUND 30 X10⁻⁵ S⁻¹ OVER THE SOUTH MYANMAR & ADJOINING NORTH ANDAMAN SEA. POSITIVE UPPER-LEVEL DIVERGENCE AROUND 20X10⁻⁵ S⁻¹ IS SEEN OVER EASTCENTRAL BOB TO THE WEST OF SYSTEM AREA. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (10-20 KNOTS) OVER THE EASTCENTRAL & NORTH BOB. AN UPPER TROPOSPHERIC RIDGE RUNS ALONG 24°N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER WESTCENTRAL MYANMAR IN 100-250 HPA LAYER. ALL THESE FEATURES ARE INDICATING FAVOURABLE ENVIRONMENT FOR DEVELOPMENT OF LOW-PRESSURE AREA OVER EASTCENTRAL & ADJOINING NORTH BOB.

MODELS LIKE NCUM, IMD GFS, NCEP GFS ARE CAPTURING THE EXISTING CIRCULATION OVER SOUTH MYANMAR & ADJOINING NORTH ANDAMAN SEA. THESE MODELS ARE INDICATING NORTH-NORTHWESTWARDS MOVEMENT TOWARDS BANGLADESH TILL 4TH OCTOBER AND NORTHWESTWARDS MOVEMENT THEREAFTER. HOWEVER, NO FURTHER INTENSIFICATION IS INDICATED.

THUS, THE EXISTING CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH & NEIGHBOURHOOD IS LIKELY TO INTENSIFY INTO A LOW PRESSURE AREA AND MOVE NORTHWESTWARDS DURING NEXT 3-4 DAYS. PROBABILITY OF CYCLOGENESIS

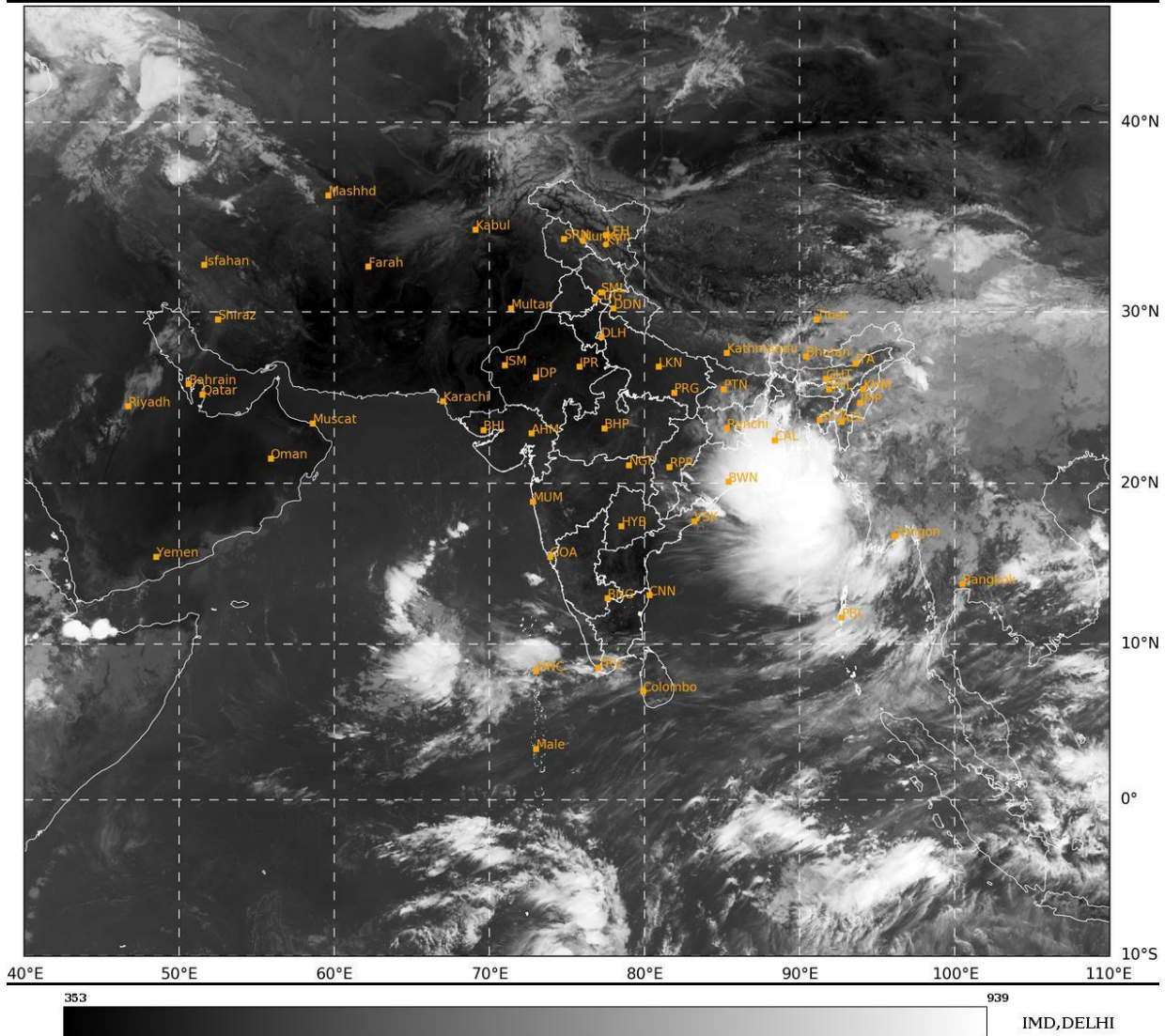
OVER BOB MAY BE TAKEN AS NIL DURING NEXT 5 DAYS

ARABIAN SEA (AS)

THE SEA SURFACE TEMPERATURE (SST) IS ABOVE 28°C IN THE EASTERN PARTS AND BELOW 26°C OVER THE WESTCENTRAL AND SOUTHWEST PARTS OF AS. THE TCHP IS >100 KJ/CM² OVER THE CENTRAL PARTS OF THE AS BUT IS BELOW 50 KJ/CM² IN THE REMAINING AREAS. A ZONE OF POSITIVE CYCLONIC VORTICITY OF 50-60 X 10⁻⁵ IS SEEN OVER WEST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST AS. A ZONE OF NORTH-SOUTH ORIENTED POSITIVE LOW-LEVEL CONVERGENCE IS SEEN OVER CENTRAL PARTS OF SOUTH AS (AROUND 5-10 X10⁻⁵ S⁻¹). UPPER-LEVEL DIVERGENCE IS AROUND 20 X10⁻⁵ S⁻¹ OVER THE SAME REGION. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (5-20 KNOTS) OVER MAJOR PARTS OF AS.

MOST OF THE MODELS ARE INDICATING EXISTING CYCLONIC CIRCULATION OVER COMORIN AND ADJOINING EQUATORIAL INDIAN OCEAN IS LIKELY TO MOVE NEARLY WESTWARDS DURING NEXT 2-3 DAYS WITHOUT ANY SIGNIFICANT INTENSIFICATION.

IN VIEW OF ALL THE ABOVE, THE EXISTING CYCLONIC CIRCULATION OVER MALDIVES & NEIGHBOURHOOD IS LIKELY TO MOVE NEARLY WESTWARDS DURING NEXT 2-3 DAYS WITHOUT ANY SIGNIFICANT INTENSIFICATION.



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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