



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 09.10.2024

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 09.10.2024 BASED ON 0300 UTC OF 09.10.2024.

BAY OF BENGAL:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST BAY OF BENGAL & EAST PARTS OF ANDAMAN SEA, TENASSERIM COAST (MINIMUM CTT MINUS 75-90 DEG CEL). SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER WESTCENTRAL & SOUTHEAST BAY OF BENGAL & GULF OF MARTABAN AND ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTH & EASTCENTRAL BAY OF BENGAL REST 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:

UNDER THE INFLUENCE OF YESTERDAY'S UPPER-AIR CYCLONIC CIRCULATION OVER LAKSHADWEEP AND ADJOINING SOUTHEAST ARABIAN SEA, A LOW-PRESSURE AREA FORMED OVER LAKSHADWEEP AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA AT 0300 UTC OF TODAY, THE 09TH OCTOBER.

IT IS LIKELY TO MOVE NORTHWESTWARDS AND INTENSIFY INTO A DÉPRESSION OVER CENTRAL ARABIAN SEA DURING NEXT 3-4 DAYS.

A TROUGH EXTENDED FROM COMORIN AREA TO NORTH KONKAN COAST ACROSS THE CYCLONIC CIRCULATION ASSOCIATED WITH LOW-PRESSURE AREA UPTO 1.5 KM ABOVE MEAN SEA LEVEL.

ANOTHER CYCLONIC CIRCULATION LAY OVER SRI LANKA AND NEIGHBOURHOOD IN THE LOWER AND MID TROPOSPHERIC LEVELS.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL & SOUTHEAST ARABIAN SEA, LAKSHADWEEP ISLANDS AREA, MALDIVES & COMORIN AREA (MINIMUM CTT MINUS 80-93 DEGREE CELCIUS) AND MODERATE TO INTENSE CONVECTION LAY OVER SOUTHWEST

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, GULF OF CAMBAY. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTH ARABIAN SEA & WESTCENTRAL 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	LOW	MOD	MOD	-

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

“-“ INDICATE GENESIS HAS ALREADY OCCURRED

REMARKS:

THE MADDEN-JULIAN OSCILLATION (MJO) IS CURRENTLY IN PHASE 4, WITH AMPLITUDE LESS THAN 1, AND IS EXPECTED TO MOVE ACROSS PHASE 4 DURING THE SUBSEQUENT 7 DAYS WITH AMPLITUDE BECOMING MORE THAN 1 FROM 12TH ONWARDS. THUS, MJO IS NOT LIKELY TO SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER ARABIAN SEA. NCICS MODEL GUIDANCE REGARDING EQUATORIAL WAVES IS INDICATING (5-7 MPS) EASTERLY WIND ANOMALY OVER THE SOUTH & ADJOINING CENTRAL BAY OF BENGAL (BOB) DURING 4TH-10TH OCTOBER. DURING WEEK 1, WESTERLY WIND ANOMALY (3-5MPS) IS LIKELY WEST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTH ARABIAN SEA (AS) ALONGWITH EASTERLY WIND ANOMALY (1-3 MPS) OVER SOUTH & CENTRAL AS (TO THE NORTH OF WESTERLY WIND ANOMALY). IT IS INDICATING FAVOURABLE ENVIRONMENT FOR THE DEVELOPMENT OF LOW-PRESSURE AREA/DEPRESSION OVER THE AS DURING THE ENSUING WEEK.

BAY OF BENGAL (BOB)

THE SEA SURFACE TEMPERATURE (SST) IS 29-31°C OVER ENTIRE BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS GREATER THAN 100 KJ/CM² OVER THE NORTHERN AND OFF THE COASTS OF WEST BENGAL, BANGLADESH & MYANMAR, AND OVER WESTCENTRAL & ADJOINING SOUTHWEST BOB OFF TAMIL NADU COAST, THE SOUTH ANDAMAN SEA AND ADJOINING SOUTHEAST BOB, WHILE IT IS BELOW 50 KJ/CM² OVER REMAINING PARTS OF THE BOB. NO SIGNIFICANT POSITIVE LOW-LEVEL VORTICITY IS SEEN OVER BAY OF BENGAL. POSITIVE LOW-LEVEL CONVERGENCE AROUND 05X10⁻⁵ S⁻¹ IS SEEN OVER GULF OF MANNAR AND ADJOINING COMORIN AREA. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND 10X10⁻⁵ S⁻¹ IS SEEN OVER GULF OF MANNAR & COMORIN AREA AND ANOTHER ZONE 05-10X10⁻⁵S⁻¹ OVER EASTCENTRAL BAY OF BENGAL OFF EAST MYANMAR COAST. VERTICAL WIND SHEAR (VWS) IS LOW (05-10 KNOTS) OVER ENTIRE BOB AND ANDAMAN SEA. UPPER TROPOSPHERIC RIDGE RUNS ALONG 16°N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER BANGLADESH IN 100-250 HPA LEVELS.

MODELS LIKE NCUM, IMD GFS, AND NCEP GFS ARE NOT INDICATING ANY CYCLONIC DISTURBANCE OVER THE BOB DURING NEXT 7 DAYS.

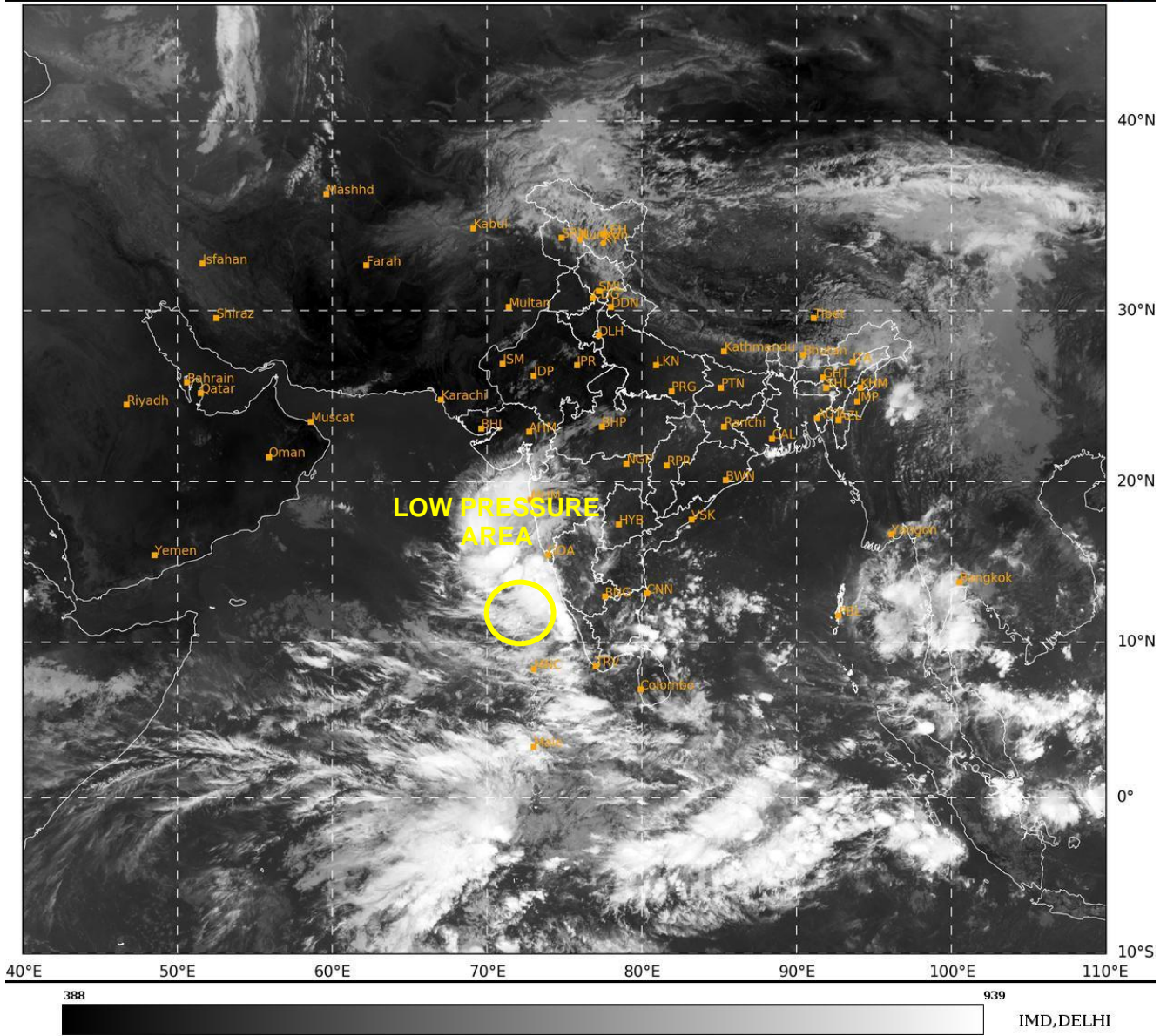
ARABIAN SEA (AS)

CURRENT OBSERVATIONS INDICATE THAT THE LOW-PRESSURE AREA IS LOCATED NEAR 11° N & 73° E OVER LAKSHADWEEP AND ADJOINING SOUTHEAST & EASTCENTRAL AS. ASSOCIATED ESTIMATED CENTRAL PRESSURE IS 1008 HPA. AMINIDIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1008.4 HPA & DEPARTURE OF -1.9 HPA. AGATHI (43266) REPORTED MEAN SEA LEVEL PRESSURE OF 1009.4 HPA & DEPARTURE OF -2.0 HPA.

THE SEA SURFACE TEMPERATURE (SST) IS ABOVE 28-30°C OVER THE EASTERN PARTS OF AS, LAKSHADWEEP AND COMORIN AREA. BELOW 26°C OVER THE WESTCENTRAL AND SOUTHWEST PARTS OF AS. THE TCHP IS 50-60KJ/CM² OVER LAKSHADWEEP & ADJOINING AREAS EASTCENTRAL AND SOUTHEAST AS AND >100 KJ/CM² OVER THE CENTRAL PARTS OF SOUTH AS. IT IS <50 KJ/CM² OVER WESTCENTRAL AS AND OFF OMAN COAST. A ZONE OF POSITIVE CYCLONIC VORTICITY OF 40-50 X 10⁻⁵ IS SEEN OVER EASTCENTRAL AS AND LAKSHADWEEP WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. ANOTHER ZONE OF POSITIVE LOW-LEVEL VORTICITY 30-40 X 10⁻⁵ IS SEEN OVER WESTCENTRAL AS. POSITIVE LOW-LEVEL CONVERGENCE (5-10 X 10⁻⁵ S⁻¹) IS SEEN OVER SOUTHEAST AS, LAKSHADWEEP AREA. A NORTH-SOUTH ORIENTED ZONE OF POSITIVE UPPER-LEVEL DIVERGENCE (10-20 X 10⁻⁵ S⁻¹) IS SEEN OVER EASTCENTRAL & SOUTHEAST ARABIAN SEA EXTENDED UPTO LAKSHADWEEP AND COMORIN AREA. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (05-15 KNOTS) OVER CENTRAL PARTS OF AS AND HIGH OVER NORTH & SOUTH AS. UPPER TROPOSPHERIC RIDGE RUNS ALONG 11°N IN 250-350 HPA LEVEL IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER GULF OF ADEN.

THERE IS CONSENSUS AMONG VARIOUS MODELS REGARDING LOW PRESSURE AREA OVER LAKSHADWEEP & NEIGHBOURHOOD AT 0000 UTC OF 9TH OCTOBER. HOWEVER, THERE IS LARGE VARIATION AMONG VARIOUS MODELS REGARDING DATE OF FORMATION OF DEPRESSION (BETWEEN 11TH -16TH OCTOBER). HOWEVER, SOME MODELS LIKE NCUM GROUP AND NCEP GFS ARE INDICATING FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION/CYCLONIC STORM. BUT THERE IS CONSENSUS AMONG ALL MODELS THAT THE SYSTEM WOULD WEAKEN OVER WESTCENTRAL AS AND REACH OMAN-YEMEN COAST AS A DEPRESSION/LOW PRESSURE AREA. THIS FEATURE IS ALSO SUPPORTED BY LOW SST & LOW TCHP OVER WESTCENTRAL ARABIAN SEA AND ALONG & OFF OMAN COAST.

CONSIDERING ALL THE ABOVE, THE LOW-PRESSURE AREA OVER LALSHADWEEP & ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA IS LIKELY TO INTENSIFY INTO A DEPRESSION DURING NEXT 3-4 DAYS. HENCE PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) IS TAKEN AS LOW TO MODERATE DURING NEXT 3-4 DAYS.



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