



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 19.10.2024

TROPICAL WEATHER OUTLOOK FOR THE NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR THE NEXT 168 HOURS ISSUED AT 0600 UTC OF 19.10.2024 BASED ON 0300 UTC OF 19.10.2024.

BAY OF BENGAL:

A CYCLONIC CIRCULATION LAY OVER CENTRAL ANDAMAN SEA AT 0300 UTC OF TODAY THE 19 OCTOBER. UNDER ITS INFLUENCE, A LOW-PRESSURE AREA IS LIKELY TO FORM OVER THE EASTCENTRAL BAY OF BENGAL AND ADJOINING NORTH ANDAMAN SEA ON 21ST OCTOBER, THEREAFTER, IT IS LIKELY TO MOVE NORTHWESTWARDS AND INTENSIFY FURTHER INTO A DEPRESSION BY 23RD OCTOBER.

ANOTHER CYCLONIC CIRCULATION LAY OVER GULF OF THAILAND EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL AT 0300 UTC OF TODAY, THE 19TH OCTOBER, 2024.

ANOTHER CYCLONIC CIRCULATION LAY OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL OFF NORTH TAMIL NADU COAST EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL TILTING SOUTHWESTWARDS WITH HEIGHT AT 0300 UTC OF TODAY, THE 19TH OCTOBER, 2024.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WESTCENTRAL BAY OF BENGAL, OFF ANDHRA PRADESH COAST, EASTCENTRAL BAY OF BENGAL, SOUTH BAY OF BENGAL & ANDAMAN SEA (MINIMUM CTT MINUS 75-90 DEG CEL). SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTH BAY OF BENGAL, OFF GANGETIC WEST BENGAL& BANGLADESH COASTS, GULF OF MARTABAN, AND TENASSERIM COAST.

***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	HIGH	-

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

ARABIAN SEA:

YESTERDAY'S CYCLONIC CIRCULATION OVER LAKSHADWEEP & NEIGHBOURHOOD LAY OVER EASTCENTRAL ARABIAN SEA AT 1200 UTC OF YESTERDAY, THE 18TH UNDER ITS INFLUENCE, LOW PRESSURE AREA FORMED OVER THE SAME REGION AT 12 UTC OF, 18TH OCTOBER, 2024 AND IT LAY OVER EASTCENTRAL AND ADJOINING WESTCENTRAL ARABIAN SEA WITH ASSOCIATED CYCLONIC CIRCULATION EXTENDING UPTO 5.8 KM

ABOVE MEAN SEA LEVEL. IT IS LIKELY TO MOVE WEST NORTHWESTWARDS AWAY FROM THE INDIAN COAST AND BECOME MORE MARKED DURING THE NEXT 2 DAYS.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER CENTRAL ARABIAN SEA (MINIMUM CTT MINUS 85 DEGREE CELCIUS). SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTH & SOUTH ARABIAN SEA, GULF OF KUTCH, GULF OF CAMBAY, 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	LOW	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 5, WITH AMPLITUDE MORE THAN 1, AND IS EXPECTED TO MOVE ACROSS PHASE 5 DURING NEXT 7 DAYS WITH FURTHER INCREASING AMPLITUDE. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL DURING NEXT 5 DAYS.

THE GUIDANCE FROM NCICS BASED FORECAST OVER BOB INDICATES WESTERLY WINDS (1-3 MPS) OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN AND EASTERLY WINDS (1-3 MPS) OVER WESTCENTRAL BOB. EASTWARD MOVING MJO & KELVIN WAVES ALONG WITH EQUATORIAL ROSSBY WAVES ARE ALSO LIKELY OVER THE CENTRAL BAY OF BENGAL DURING NEXT 5-7 DAYS. THESE FEATURES INDICATE HIGHLY FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER THE CENTRAL PARTS OF THE BAY OF BENGAL.

SIMILARLY, OVER THE ARABIAN SEA (AS) NCICS MODEL INDICATE PRESENCE OF WESTERLY WINDS (5-9 MPS) OVER SOUTH ARABIAN SEA AND EASTERLY WINDS (3-7 MPS) OVER CENTRAL ARABIAN SEA ALONGWITH EASTWARD MOVING MJO AND WESTWARDS MOVING EQUATORIAL ROSSBY WAVE OVER NORTHEAST ARABIAN SEA AND ADJOINING AREA OF GUJARAT. THESE FEATURES ARE SUPPORTIVE MAINTAINING CONVECTIVE ACTIVITY OVER THE WESTCENTRAL AS.

BAY OF BENGAL (BOB)

THE SEA SURFACE TEMPERATURE (SST) IS 29-32°C OVER ENTIRE BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS >100 KJ/CM² OVER NORTHEAST BOB AND WESTCENTRAL BOB, <80 KJ/CM² OVER NORTHWEST & ADJOINING WESTCENTRAL BOB & 80-100 KJ/CM² OVER REMAINING BOB. A ZONE OF POSITIVE CYCLONIC VORTICITY OF 30-40 X 10⁻⁵ OVER NORTH ANDAMAN SEA OFF THAILAND COAST WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL AND 20-30 X10⁻⁵S⁻¹ OVER WESTCENTRAL BOB OFF TAMIL NADU COAST. POSITIVE LOW-LEVEL CONVERGENCE IS 10-20 X10⁻⁵S⁻¹ OVER NORTH ANDAMAN SEA OFF THAILAND COAST AND 5 X10⁻⁵S⁻¹ OVER WESTCENTRAL BOB OFF TAMIL NADU COAST. POSITIVE UPPER-LEVEL DIVERGENCE IS 20-30 X10⁻⁵S⁻¹ OVER NORTH ANDAMAN SEA OFF THAILAND COAST. VERTICAL WIND SHEAR (VWS) IS LOW OVER NORTH & CENTRAL BOB AND HIGH OVER SOUTH BOB AND ADJOINING EIO. UPPER TROPOSPHERIC RIDGE RUNS ALONG 17°N.

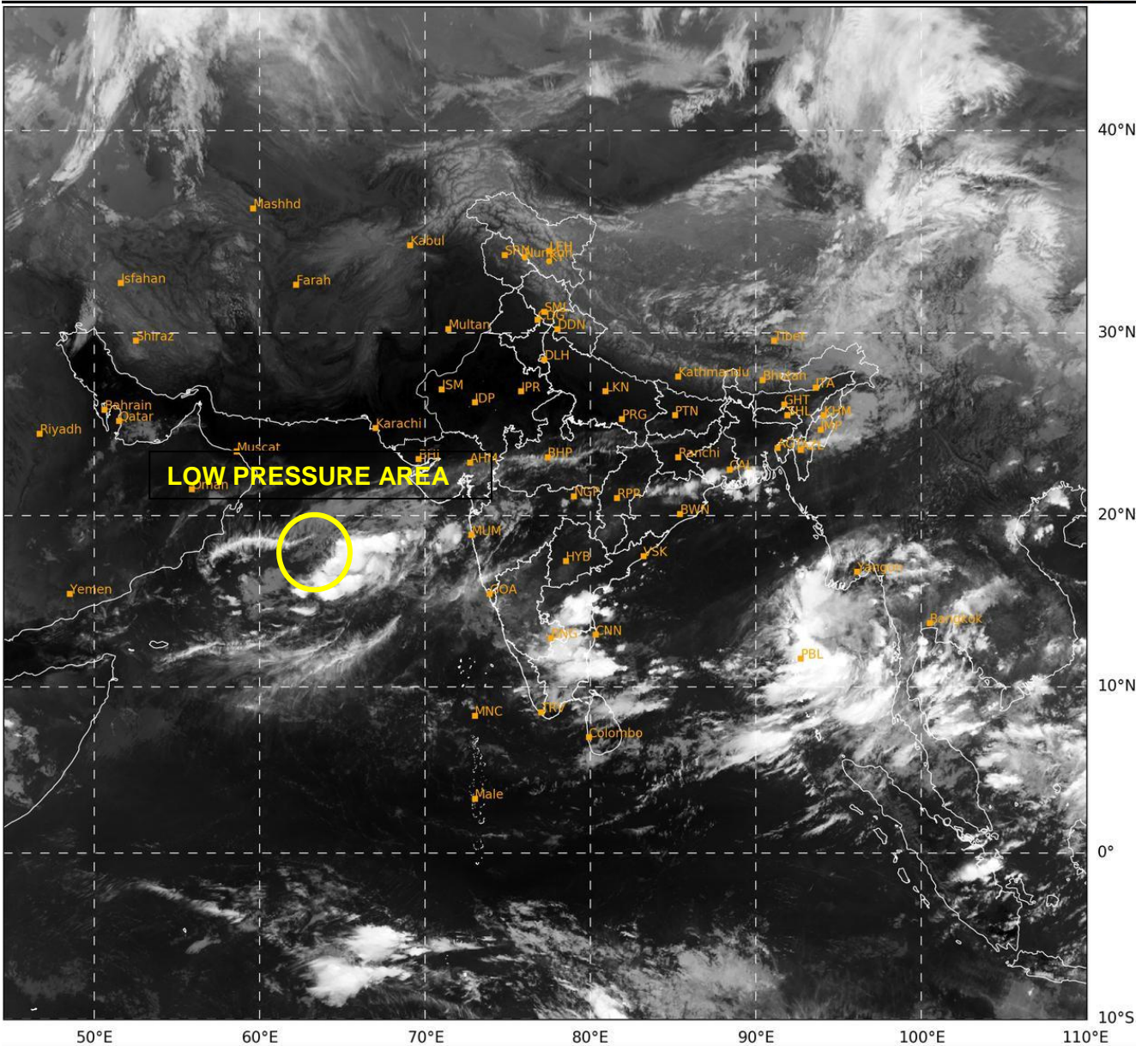
IMD GFS INDICATING LOW-PRESSURE AREA OVER EAST BOB (13.8/93) ON 22/00 UTC, DEPRESSION OVER EASTCENTRAL BOB (14.8/89.8) ON 23/00 UTC, CYCLONIC STORM (CS) OVER CENTRAL PARTS OB BOB (15.2/88) AT 24/00 UTC AND NORTHEAST MOVEMENT TOWARDS ODISHA COAST TILL 26TH AND TOWARDS WEST BENGAL COSAT 29/00 UTC AS VSCS AND ABOVE CATEGORY SYSTEM. NCUM(G) IS INDICATING A LOW-PRESSURE AREA

OVER EASTCENTRAL BOB ON 21/00 UTC, DEPRESSION OVER EASTCENTRAL BOB ON 23/00 UTC, CS OFF NORTH ANDHRA PRADESH COAST ON 24/00 UTC, AND CROSSING OVER ANDHRA PRADESH COAST (17.5/83.0) ON 25/03 UTC. ECMWF IS INDICATING DEPRESSION OVER EASTCENTRAL BOB (14.7/90.8) ON 22/03 UTC, CYCLONIC STORM (CS) OVER EASTCENTRAL BOB (15.3/88.1) ON 23/03 UTC AND CROSSING OVER SOUTH ODISHA-NORTH ANDHRA PRADESH COASTS (19.1/84.8) ON 25/00 UTC. NCEP GFS IS INDICATING LPA OVER NORTH ANDAMAN SEA (13.9/95.2) ON 20/00 UTC, DEPRESSION OVER EASTCENTRAL BOB (14.7/93.7) ON 20/12 UTC, CS OVER EASTCENTRAL BOB (15.5/91.5) ON 21/12 UTC AND CROSSING OVER WEST BENGAL-BANGLADESH COASTS (21.7/88.4) 24/06 UTC AS VSCS AND ABOVE CATEGORY SYSTEMS.

ARABIAN SEA (AS)

THE SEA SURFACE TEMPERATURE (SST) IS 28-30°C OVER EASTERN PARTS OF AS AND 27°C OVER THE WESTCENTRAL AND SOUTHWEST PARTS OF AS. THE TROPICAL CYCLONE HEAT POTENTIAL IS 60-70 KJ/CM² OVER EASTCENTRAL AS AND LESS THAN 50 KJ/CM² OVER WESTCENTRAL AS & OFF OMAN AND SOMALIA COASTS. LOW-LEVEL VORTICITY IS AROUND 30-40 X 10⁻⁵ OVER CENTRAL AS WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL AND 20-30 X 10⁻⁵ OVER WESTCENTRAL AS OFF SOMALIA COAST. LOW-LEVEL CONVERGENCE IS AROUND 5-10 X 10⁻⁵S⁻¹ OVER CENTRAL AS. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND 5-10 X 10⁻⁵ S⁻¹ OVER CENTRAL AS OFF MAHARASHTRA COAST. DEEP LAYER WIND SHEAR (VWS) IS LOW OVER NORTH & CENTRAL AS AND HIGH OVER SOUTH AS AND ADJOINING EIO. UPPER TROPOSPHERIC RIDGE RUNS ALONG 19°N.

IMD GFS INDICATING A LOW PRESSURE AREA OVER EASTCENTRAL ARABIAN SEA ON 19/00 MOVING NEARLY WESTWARDS TILL 22ND TOWARDS OMAN-YEMEN COASTS LESS MARKED THEREAFTER. NCUM IS INDICATING LPA OVER CENTRAL PARTS OF ARABIAN SEA 19/00 WITH NRAELY WNW MOVEMENT TOWARDS YEMEN COAST TILL 22/00 AND LESS MARKED THEREAFTER. NCEP GFS IS INDICATING A WML AREA OVER CENTRAL PARTS OF AS ON 19/00, DEPRESSION OVER WESTCENTRAL AS (15.9/63.5) ON 20/00, LPA OVE WESTCENTRAL AS (15.2/60.3) ON 21/06 UTC, CROSSING OMAN- YEMEN COAST AS CIRCULATION ON 23/12 UTC. ECMWF IS INDICATING WML AREA OVER EASTCENTRAL AS 16/65 ON 19/00 UTC, LPA OVER WESTCENTRAL AS (14.7/63) ON 20/00, CROSSING OVER YEMEN- OMAN COASTS AS CYCLONIC CIRCULATION.



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IMD, DELHI

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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