



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.10.2024

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 07.10.2024 BASED ON 0300 UTC OF 07.10.2024.

BAY OF BENGAL:

YESTERDAY'S UPPER AIR CYCLONIC CIRCULATION OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL OFF NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS BECAME LESS MARKED AT 0300 UTC OF TODAY, THE 07TH OCTOBER.

SCATTERED LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL AND ANDAMAN SEA (MINIMUM CLOUD TOP TEMPERATURE MINUS 75-90 DEG CELCIUS). SCATTERED LOW & MEDIUM CLOUDS WITH EMBEDDED ISOLATED MODERATE TO INTENSE CONVECTION LAY OVER NORTH & CENTRAL BAY OF BENGAL.

***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:

A CYCLONIC CIRCULATION LAY OVER SOUTH KERALA & NEIGHBOURHOOD AT 0300 UTC OF TODAY, THE 7TH OCTOBER, 2024. IT EXTENDED UPTO 1.5 KM ABOVE MEAN SEA LEVEL. A TROUGH ALSO EXTENDED FROM SOUTHWEST BAY OF BENGAL TO LAKSHADWEEP ACROSS SOUTH TAMIL NADU AND THE ABOVE CYCLONIC CIRCULATION OVER SOUTH KERALA UPTO 1.5 KM ABOVE MEAN SEA LEVEL.

UNDER THEIR INFLUENCE, A LOW-PRESSURE AREA IS LIKELY TO FORM OVER LAKSHADWEEP AND ADJOINING SOUTHEAST & EASTCENTRAL ARABIAN SEA AROUND 09TH OCTOBER. IT IS LIKELY TO MOVE NORTHWESTWARDS THEREAFTER.

SCATTERED LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA, SOUTH ARABIAN SEA, LAKSHADWEEP ISLANDS AREA, MALDIVES & COMORIN AREA (MINIMUM CLOUD TOP TEMPERATURE MINUS 75-93 DEG CELCIUS). SCATTERED LOW & MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTH PARTS OF WESTCENTRAL ARABIAN SEA AND ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTHEAST ARABIAN SEA OFF GUJARAT COAST.

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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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 3, WITH AMPLITUDE CLOSE TO 1, AND IS EXPECTED TO CONTINUE IN SAME PHASE DURING NEXT 3 DAYS. THEREAFTER, IT IS LIKELY TO MOVE ACROSS PHASE 4 DURING THE SUBSEQUENT 7 DAYS. THUS, MJO IS FAVOURABLE FOR THE ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE ARABIAN SEA (AS) DURING THE NEXT 3 DAYS AND THE BAY OF BENGAL FROM 10TH ONWARDS. 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 28-32°C OVER ENTIRE BOB. THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS GREATER THAN 100 KJ/CM² OVER THE NORTHERN AND ADJOINING EASTCENTRAL PARTS OF BOB 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 05-10 X10⁻⁵ S⁻¹ IS SEEN OVER NORTH ANDAMAN SEA AND OTHER OVER SOUTHEAST BOB & WESTCENTRAL BOB. POSITIVE UPPER-LEVEL DIVERGENCE IS AROUND 5-10X10⁻⁵ S⁻¹ IS SEEN OVER NORTH ANDAMAN SEA AND SOUTHEAST BAY OF BENGAL. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (10-20 KNOTS) OVER ENTIRE BOB AND ANDAMAN SEA. UPPER TROPOSPHERIC RIDGE RUNS ALONG 22°N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER NORTHEAST INDIA IN 100-250 HPA LEVELS.

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

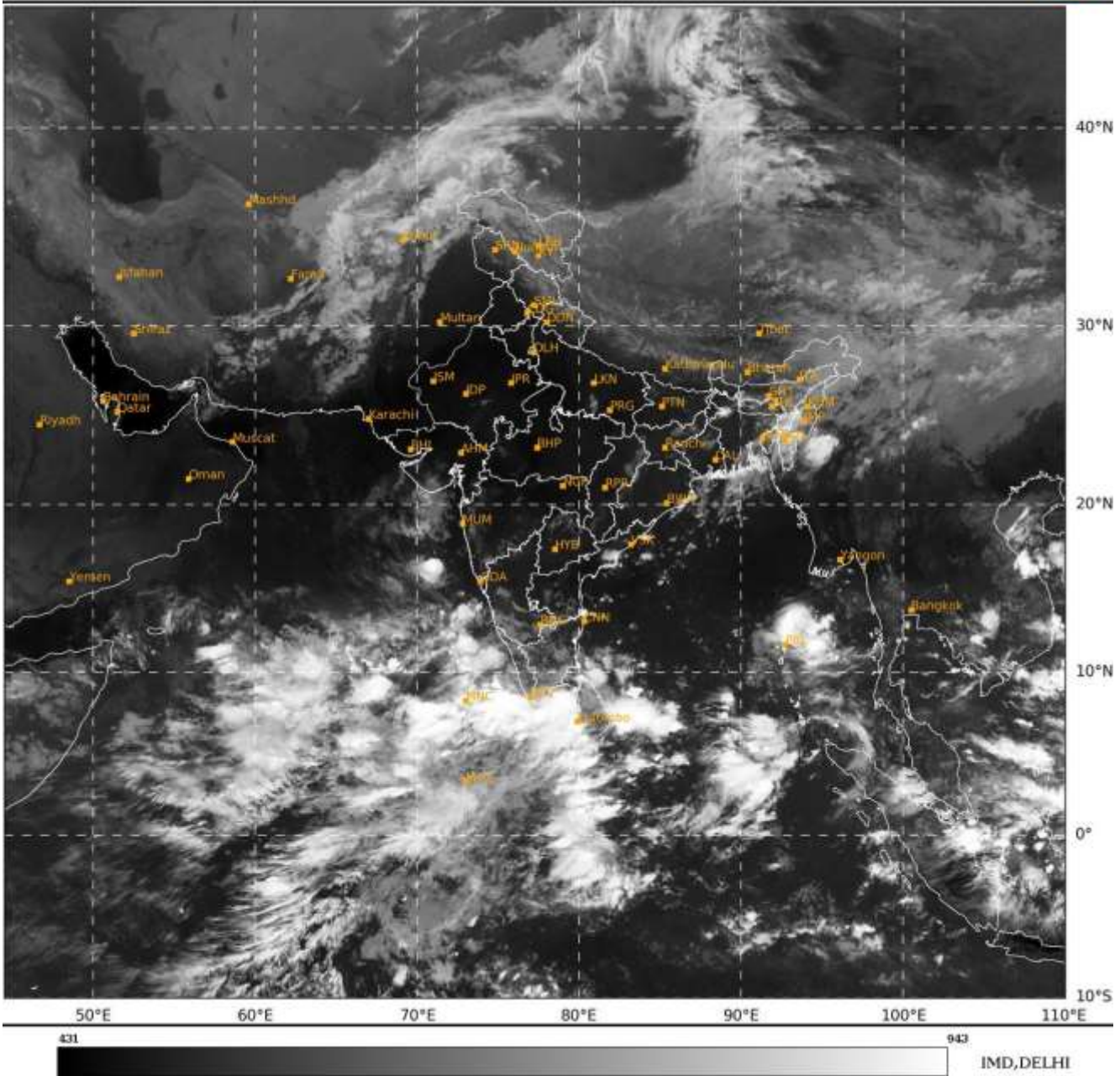
ARABIAN SEA (AS)

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 30-40 X 10⁻⁵ IS SEEN OVER SOUTHEAST AS, LAKSHADWEEP & COMORIN AREA WITH VERTICAL EXTENSION UPTO 700 HPA LEVEL. ANOTHER ZONE OF POSITIVE LOW-LEVEL VORTICITY IS SEEN OVER CENTRAL PARTS OF AS EXTENDING UPTO NORTH GUJARAT COAST AND ALSO UPTO OMAN COAST. POSITIVE LOW-LEVEL CONVERGENCE (5-10 X10⁻⁵ S⁻¹) IS SEEN OVER SOUTH AS, LAKSHADWEEP AND COMORIN AREA. AN EXTENDED ZONE OF POSITIVE UPPER-LEVEL DIVERGENCE (5-20 X10⁻⁵ S⁻¹) IS SEEN OVER SOUTH ARABIAN SEA, LAKSHADWEEP AND COMORIN AREA. VERTICAL WIND SHEAR (VWS) IS LOW TO MODERATE (5-15 KNOTS) OVER SOUTHEAST AS, LAKSHADWEEP AND MAJOR PARTS OF CENTRAL AS AND HIGH OVER NORTH & SOUTH AS. UPPER TROPOSPHERIC RIDGE RUNS ALONG 21°N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OVER OMAN COAST IN 250-350 HPA LEVEL.

MOST OF THE MODELS INCLUDING IMD GFS, NCUM, GEFS, NCEP GFS, ECMWF ARE INDICATING DEVELOPMENT OF A LOW-PRESSURE AREA OVER LAKSHADWEEP & ADJOINING AREAS OF SOUTHEAST & EASTCENTRAL ARABIAN SEA AROUND 9TH OCTOBER. HOWEVER, NCEP GFS IS INDICATING LATE FORMATION OF LOW-PRESSURE AREA AROUND 12TH OCTOBER. IMD GFS, NCUM, NCEP GFS ARE INDICATING INTENSIFICATION OF THIS SYSTEM INTO A DEPRESSION OVER EASTCENTRAL ARABIAN SEA DURING 11TH-13TH OCTOBER. THESE MODELS ARE ALSO INDICATING FURTHER INTENSIFICATION OF THIS SYSTEM INTO A CYCLONIC STORM. ECMWF AND GEFS ARE NOT INDICATING ANY SIGNIFICANT INTENSIFICATION. HOWEVER, THERE IS CONSENSUS AMONG VARIOUS MODELS THAT THE SYSTEM WOULD MOVE TOWARDS OMAN COAST AND WEAKEN INTO A DEPRESSION BEFORE LANDFALL. THIS FEATURE IS SUPPORTED BY LOW SST & LOW TCHP OVER WESTCENTRAL ARABIAN SEA AND ALONG & OFF OMAN COAST. CONSIDERING ALL THE ABOVE, PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) IS TAKEN AS NIL DURING NEXT 7 DAYS. HOWEVER, CONTINUOUS WATCH IS BEING MAINTAINED.

SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
LIC Mercator

07-10-2024/(0245 to 0312) GMT
07-10-2024/(0815 to 0842) IST



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