



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 26.11.2023

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 26.11.2023 BASED ON 0300 UTC OF 26.11.2023.

BAY OF BENGAL:

A CYCLONIC CIRCULATION LAY OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE EARLY MORNING (0000 UTC) OF TODAY, THE 26TH NOVEMBER, 2023. IT LAY OVER SOUTH ANDAMAN SEA AND ADJOINING SOUTH THAILAND AT 0300 UTC EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL. UNDER ITS INFLUENCE, A LOW-PRESSURE AREA IS LIKELY TO FORM OVER SOUTH ANDAMAN SEA & ADJOINING SOUTHEAST BAY OF BENGAL AROUND 27TH NOVEMBER. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY INTO A DEPRESSION OVER SOUTH-EAST BAY OF BENGAL AROUND 29TH NOVEMBER 2023.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH ANDAMAN SEA (MINIMUM CLOUD TOP TEMPERATURE MINUS 80°C. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL AND ISOLATED WEAK TO MODERATE CONVECTION LAY OVER NORTH 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	LOW	MOD	HIGH	HIGH	HIGH

ARABIAN SEA:

YESTERDAYS CYCLONIC CIRCULATION OVER SOUTHEAST AND ADJOINING SOUTHWEST ARABIAN SEA EXTENDING UPTO 1.5 KM ABOVE MEAN SEA LEVEL PERSISTS OVER THE SAME REGION.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER GULF OF CAMBAY (MINIMUM CLOUD TOP TEMPERATURE MINUS 80°C. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER EASTCENTRAL ARABIAN SEA OFF KARNATAKA COAST & SOUTH 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:

MADDEN JULIAN OSCILLATION (MJO) IS CURRENTLY IN PHASE 3 WITH AMPLITUDE GREATER THAN 1. IT WOULD MOVE ACROSS PHASES 3 AND 4 WITH AMPLITUDE GREATER THAN 1 DURING 26TH NOVEMBER TO 6TH DECEMBER. THUS, MJO WOULD SUPPORT CYCLOGENESIS OVER THE BAY OF BENGAL (BOB) REGION TILL 6TH DECEMBER. SEA SURFACE TEMPERATURE IS 28-30°C OVER MAJOR PARTS OF BOB. TROPICAL CYCLONE HEAT POTENTIAL IS 80-100 KJ/CM² OVER SOUTH ANDAMAN SEA, 100-120 KJ/CM² OVER PARTS OF EASTCENTRAL AND ADJOINING SOUTHEAST BOB. THE NCICS BASED FORECASTS FOR EQUATORIAL WAVES INDICATE STRENGTHENING OF WESTERLY WINDS ALONGWITH PRESENCE OF EQUATORIAL ROSSBY WAVES & MJO OVER SOUTH BOB AND. EASTERLY WINDS (3-5 MPS) OVER CENTRAL BOB DURING 28TH-30TH NOVEMBER. ALL THESE LARGE SCALE FEATURES IS FAVOURABLE FOR CYCLOGENESIS (FORMATION OF DEPRESSION) OVER SOUTHEAST BOB AND ADJOINING ANDAMAN SEA.

CURRENT ENVIRONMENTAL FEATURES INDICATE, POSITIVE LOW LEVEL VORTICITY OF 60-80X10⁻⁶S⁻¹ OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL CONVERGENCE IS ABOUT 15-20 X 10⁻⁵ S⁻¹ OVER SOUTH ANDAMNA SEA. POSITIVE UPPER LEVEL DIVERGENCE IS ABOUT 10-20 X 10⁻⁵ S⁻¹ OVER SOUTH ANDAMAN SEA AND IS EXTENDING UPTO SOUTHEAST BOB AND ADJOINING EQUATORIAL INDIAN OCEAN.

MOST OF THE MODELS ARE INDICATING FORMATION OF DEPRESSION OVER SOUTH BAY OF BENGAL DURING 28TH -30TH NOVEMBER, IT'S INTENSIFICATION INTO A CYCLONIC STORM AND IT'S NORTHEASTWARDS RECURVATURE. HOWEVER, THERE IS LARGE VARIATION AMONG VARIOUS MODELS WRT AREA OF FORMATION OF DEPRESSION, TIME OF FORMATION, POINT OF RECURVATURE AND INTENSITY. IMD GFS IS INDICATING LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA ON 27TH, SEVERE CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL (BOB) ON 28TH, WEST-NORTHWESTWARDS MOVEMENT TILL 2ND NOVEMBER, FOLLOWED BY NORTH-NORTHEASTWARDS TOWARDS BANGLADESH COAST AND RAPID WEAKENING NEAR COAST. NCEP GFS IS INDICATING LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA ON 27TH, DEPRESSION OVER SOUTHEAST BOB ON 29TH, WEST-NORTHWESTWARDS MOVEMENT TILL 30TH OVER SOUTHEAST BOB, FOLLOWED BY NEARLY NORTHEASTWARDS MOVEMENT TOWARDS BANGLADESH-MYANMAR COAST. REGARDING INTENSIFICATION, NCEP GFS IS ALSO INDICATING INTENSIFICATION UPTO SEVERE CYCLONIC STORM TILL 2ND DECEMBER AND WEAKENING FROM 4TH DECEMBER ONWARDS WITH SYSTEM REACHING COAST AS A DEPRESSION. THUS, BOTH GFS MODELS ARE INDICATING MOVEMENT TOWARDS BANGLADESH COAST WITH WEAKENING. ECMWF IS INDICATING DEPRESSION OVER SOUTHEAST BOB ON 29TH, WITH INTENSIFICATION INTO A SEVERE CYCLONIC STORM AND INITIAL WEST-NORTHWESTWARDS MOVEMENT TOWARDS WESTCENTRAL BOB TILL 4TH/1800 UTC, FOLLOWED BY NORTHEASTWARDS RECURVATURE OVER WESTCENTRAL BOB ON 5TH DECEMBER/0000 UTC. NCUM IS INDICATING A LOW PRESSURE AREA OVER SOUTHEAST BOB ON 1ST DECEMBER, DEPRESSION OVER SOUTHWEST BOB ON 3RD DECEMBER AND INTENSIFICATION INTO A CYCLONIC STORM OVER WESTCENTRAL BOB ON 5TH DECEMBER WITH INITIAL NORTH-NORTHWESTWARDS MOVEMENT TILL 4TH FOLLOWED BY NORTH-NORTHEASTWARDS MOVEMENT TILL 6TH DECEMBER TOWARDS EASTCENTRAL BOB.

IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT A LOW-PRESSURE AREA IS LIKELY TO FORM OVER SOUTH ANDAMAN SEA & ADJOINING SOUTHEAST BAY OF BENGAL AROUND 27TH NOVEMBER. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY INTO A DEPRESSION OVER SOUTHEAST BAY OF BENGAL AROUND 29TH NOVEMBER 2023.

(M. SHARMA)
SCIENTIST-D

