



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 28.09.2021

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL OF BENGAL OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 28.09.2021 BASED ON 0300 UTC OF 28.09.2021.

BAY OF BENGAL:

1. DEPRESSION (REMNANT OF CYCLONIC STORM "GULAB" OVER SOUTHWEST VIDARBHA AND NEIGHBOURHOOD

THE DEPRESSION OVER TELANGANA AND ADJOINING AREAS OF MARATHWADA & VIDARBHA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 26 KMPH DURING LAST 06 HOURS AND LAY CENTERED AT 0300 UTC OF 28TH SEPTEMBER 2021 OVER SOUTHWEST VIDARBHA & NEIGHBOURHOOD NEAR LAT. 19.4°N AND LONG. 77.3°E, ABOUT 60 KM EAST-NORTHEAST OF PARBHANI (MARATHWADA) AND 250 KM SOUTHWEST OF NAGPUR (VIDARBHA). IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 06 HOURS.

2. LOW PRESSURE AREA OVER NORTHWEST BAY OF BENGAL

UNDER THE INFLUENCE OF CYCLONIC CIRCULATION OVER NORTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL, A LOW PRESSURE AREA FORMED OVER NORTHWEST BAY OF BENGAL & ADJOINING COASTAL AREAS OF WEST BENGAL AT 0300 UTC OF TODAY, THE 28TH SEPTEMBER, 2021. IT IS LIKELY TO BECOME MORE MARKED DURING NEXT 24 HOURS. IN IT'S ASSOCIATION, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH BAY OF BENGAL AND ADJOINING COASTAL GANGETIC WEST BENGAL & COASTAL BANGLADESH. MINIMUM CLOUD TOP TEMPERATURE IS -93°C.

3. CONVECTION OVER REST PARTS OF BAY OF BENGAL:

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH AND ADJOINING CENTRAL & SOUTH CENTRAL BAY OF BENGAL. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER ANDAMAN SEA AND GULF OF MARTABAN.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	NIL	NIL	NIL

ARABIAN SEA:

THE REMNANT OF CYCLONIC STORM "GULAB" IS LIKELY TO EMERGE INTO NORTHEAST ARABIAN SEA AND ADJOINING GUJARAT COAST AROUND 30TH SEPTEMBER AND THERE IS LIKELIHOOD FOR THE SYSTEM TO FURTHER INTENSIFY OVER NORTHEAST ARABIAN SEA DURING THE SUBSEQUENT 24 HOURS.

CONVECTION OVER ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EXTREME SOUTHEAST ARABIAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER NORTHEAST ARABIAN SEA, GULF OF CAMBAY, EASTCENTRAL AND REST OF SOUTHEAST ARABIAN SEA & COMORIN REGION.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	LOW	MODERATE	HIGH

REMARKS:

1. SEA AND ENVIRONMENTAL CONDITIONS OVER BAY OF BENGAL:

SEA SURFACE TEMPERATURE (SST) OF ABOUT 28-29°C OVER NORTH BAY OF BENGAL (BOB), TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 60-80 KJ/CM² OVER THE REGION. MADDEN JULIAN OSCILLATION (MJO) INDEX IS LYING IN PHASE 4 WITH AMPLITUDE CLOSE TO 1, IT WILL CONTINUE IN SAME PHASE FOR NEXT 2 DAYS WITH AMPLITUDE REMAINING MORE THAN 1. THEREAFTER IT WILL MOVE TO PHASE 5. THUS, MJO WILL SUPPORT CONVECTIVE ACTIVITY OVER BAY OF BENGAL DURING NEXT 2 DAYS. A ZONE OF POSITIVE LOW LEVEL VORTICITY ($50 \times 10^{-6} S^{-1}$) LIES OVER NORTHWEST BAY OF BENGAL. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF $20 \times 10^{-5} S^{-1}$ LIES TO THE SOUTHEAST OF SYSTEM CENTRE. POSITIVE UPPER LEVEL DIVERGENCE OF $40 \times 10^{-5} S^{-1}$ IS ALSO SEEN AROUND TO THE SOUTHEAST OF SYSTEM CENTRE. LOW VERTICAL WIND SHEAR (VWS) IS ABOUT (10-15 KTS) IS PREVAILING OVER NORTHBAY OF BENGAL. THE SUB-TROPICAL RIDGE IS SEEN ALONG LAT. 24°N. EASTERLY WINDS PREVAILING TO THE SOUTH OF THE RIDGE WOULD STEER THE SYSTEM NEARLY WESTWARDS.

MOST OF THE NUMERICAL MODELS ARE INDICATING THAT THE LOW PRESSURE AREA OVER NORTH BAY OF BENGAL WOULD MOVE WESTWARDS WITHOUT SIGNIFICANT INTENSIFICATION.

UNDER THESE CONDITIONS, THE SYSTEM IS LIKELY TO BECOME MORE MARKED DURING NEXT 24 HOURS WITH NEAR WESTWARDS MOVEMENT SUBSEQUENTLY.

2. SEA AND ENVIRONMENTAL CONDITIONS OVER ARABIAN SEA

SEA SURFACE TEMPERATURE (SST) OF ABOUT 28-29°C OVER NORTHEAST AND EASTCENTRAL ARABIAN SEA WITH DECREASING TREND TOWARDS WEST. SIMILARLY, TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-90 KJ/CM² OVER NORTHEAST ARABIAN SEA WITH DECREASING TREND TOWARDS THE NORTHWEST & WESTCENTRAL ARABIAN SEA. A ZONE OF POSITIVE LOWER LEVEL CONVERGENCE OF $10 \times 10^{-5} S^{-1}$ OVER EASTCENTRAL & ADJOINING NORTHEAST ARABIAN SEA. POSITIVE UPPER LEVEL DIVERGENCE OF $10 \times 10^{-5} S^{-1}$ IS ALSO SEEN OVER THE SAME REGION. LOW VERTICAL WIND SHEAR (VWS) ABOUT (10-15 KTS) IS PREVAILING OVER NORTH ARABIAN SEA. UNDER THESE FAVOURABLE SEA AND ENVIRONMENTAL CONDITIONS, THE REMNANT OF CYCLONIC STORM "GULAB" EMERGING INTO NORTHEAST ARABIAN SEA IS LIKELY TO INTENSIFY GRADUALLY.

MOST THE MODELS ARE INDICATING THAT THE REMNANT OF CYCLONIC STORM "GULAB" WOULD INTENSIFY FURTHER AFTER EMERGING INTO ARABIAN SEA. THERE IS LARGE VARIATION W.R.T. MOVEMENT OF SYSTEM.

UNDER THESE FAVOURABLE CONDITIONS THERE IS MODERATE PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) OVER NORTHEAST ARABIAN SEA AND NEIGHBOURING AREAS FROM 30TH SEPTEMBER.

