



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 16.11.2021

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 16.11.2021 BASED ON 0300 UTC OF 16.11.2021.

BAY OF BENGAL:

YESTERDAY'S LOW PRESSURE AREA OVER NORTH ANDAMAN SEA & NEIGHBOURHOOD MOVED SLIGHTLY WESTWARDS AND LAY OVER SOUTHEAST BAY OF BENGAL (BOB) & ADJOINING NORTH ANDAMAN SEA AT 0000 UTC OF TODAY THE 16TH NOVEMBER 2021 . FURTHER MOVING WESTWARDS, IT LAY OVER SOUTHEAST BOB AT 0300 UTC. IT IS LIKELY TO MOVE NEARLY WESTWARDS AND REACH WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL OFF SOUTH ANDHRA PRADESH AND ADJOINING NORTH TAMIL NADU COASTS ON 18TH NOVEMBER 2021.

AS PER SATELLITE IMAGERY AT 0300 UTC, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHEAST BOB AND NEIGHBOURHOOD. MINIMUM CLOUD TOP TEMPERATURE (CTT) WAS MINUS 93⁰C .

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:

UNDER THE INFLUENCE OF YESTERDAY'S CYCLONIC CIRCULATION OVER EASTCENTRAL & ADJOINING SOUTHEAST ARABIAN SEA (AS) A LOW PRESSURE AREA FORMED OVER EASTCENTRAL ARABIAN SEA OFF KARNATAKA COAST AT 0000 UTC OF TODAY, THE 16TH NOVEMBER 2021. IT PERSISTED OVER THE SAME REGION AT 0300 UTC. IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS & BECOME MORE MARKED DURING NEXT 48 HOURS.

AS PER SATELLITE IMAGERY AT 0300 UTC, SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EASTCENTRAL AS BETWEEN LATITUDE 12.0N & 15.0N LONGITUDE 69.0E & 74.0E. MINIMUM CTT WAS MINUS 93⁰C.

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	LOW	NIL

REMARKS:

(A): LOW PRESSURE AREA OVER SOUTHEAST BOB:

SEA SURFACE TEMPERATURE (SST) IS ABOUT 30-32⁰C OVER SOUTHEAST BOB AND ANDAMAN SEA. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT 80-100 KJ/CM²

OVER ANDAMAN SEA ADJOINING SOUTHWEST BOB AND CENTRAL BOB. HOWEVER, IT IS DECREASING BECOMING $<50 \text{ KJ/CM}^2$ OVER WESTCENTRAL BOB OFF NORTH ANDHRA PRADESH AND ADJOINING SOUTH ODISHA & NORTH TAMILNADU COASTS. MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 4 WITH AMPLITUDE CLOSE TO 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE REMAINING CLOSE TO 1 DURING NEXT 3 DAYS. THE POSITIVE LOW LEVEL VORTICITY IS ABOUT $(50-60 \times 10^{-6} \text{ S}^{-1})$ OVER SOUTHEAST BOB AND ADJOINING ANDAMAN SEA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. AN EXTENDED ZONE OF POSITIVE LOW LEVEL CONVERGENCE OF $05-10 \times 10^{-5} \text{ S}^{-1}$ LAY OVER ANDAMAN SEA & ADJOINING CENTRAL PARTS OF BOB AND EQUATORIAL INDIAN OCEAN. AN EXTENDED ZONE OF POSITIVE UPPER LEVEL DIVERGENCE IS AROUND $05-10 \times 10^{-5} \text{ S}^{-1}$ OVER EASTCENTRAL & SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN. VERTICAL WIND SHEAR IS LOW (05-15 KTS) OVER CENTRAL BOB. THE UPPER TROPOSPHERIC RIDGE LAY NEAR 17.5°N IN ASSOCIATION WITH ANTICYCLONIC CIRCULATION OFF MYANMAR COAST. UNDER THESE OCEANIC AND ENVIRONMENTAL CONDITIONS, THERE WAS NO SIGNIFICANT CHANGE IN INTENSITY OF THE LOW PRESSURE AREA OVER SOUTHEAST BOB.

MOST OF THE MODELS (IMD GFS, NCEP GFS, GEFS, NCUM, ECMWF DETERMINISTIC AND ENSEMBLE) ARE INDICATING THAT THE LOW PRESSURE AREA OVER SOUTHEAST BOB WOULD MOVE NEARLY WESTWARDS AND REACH WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL OFF SOUTH ANDHRA PRADESH AND ADJOINING NORTH TAMIL NADU COASTS ON 18TH NOVEMBER 2021. NO NUMERICAL MODEL IS INDICATING INTENSIFICATION OF THE SYSTEM. THUS, THERE IS GOOD AGREEMENT AMONG VARIOUS MODELS W.R.T. INTENSITY AND TRACK OF THE SYSTEM.

IN VIEW OF ALL THE ABOVE, THE LOW PRESSURE AREA OVER SOUTHEAST BOB IS LIKELY TO MOVE NEARLY WESTWARDS AND REACH WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL OFF SOUTH ANDHRA PRADESH – NORTH TAMIL NADU COASTS ON 18TH NOVEMBER 2021.

(B): LOW PRESSURE AREA OVER EASTCENTRAL ARABIAN SEA OFF KARNATAKA COAST

SEA SURFACE TEMPERATURE (SST) IS ABOUT 28-29°C OVER SOUTHEAST & ADJOINING EASTCENTRAL AS, BECOMING $<28^{\circ}\text{C}$ OVER WESTERN PARTS OF THE AS. TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS ABOUT $60-80 \text{ KJ/CM}^2$ OVER SOUTHEAST & ADJOINING EASTCENTRAL AS. POSITIVE LOW LEVEL VORTICITY IS ABOUT $(50-60 \times 10^{-6} \text{ S}^{-1})$ OVER SOUTHEAST AND ADJOINING EASTCENTRAL AS WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. POSITIVE LOW LEVEL CONVERGENCE HAS INCREASED SLIGHTLY DURING PAST 24 HOURS AND IS ABOUT $10-20 \times 10^{-5} \text{ S}^{-1}$ OVER SOUTHEAST & ADJOINING EASTCENTRAL AS. POSITIVE UPPER LEVEL DIVERGENCE HAS INCREASED DURING PAST 24 HOURS AND IS AROUND $30 \times 10^{-5} \text{ S}^{-1}$ OVER SOUTHEAST & ADJOINING EASTCENTRAL AS. THE POSITIVE ZONE OF DIVERGENCE IS EXTENDING OVER ENTIRE EASTCENTRAL AS, SOUTHEAST AS, COMORIN AREA AND ADJOINING SOUTHWEST BOB. WIND SHEAR IS LOW (05-15 KT) OVER SOUTHEAST & ADJOINING EASTCENTRAL AS. UNDER THESE FAVOURABLE SEA AND ENVIRONMENTAL CONDITIONS, THE LOW PRESSURE AREA IS LIKELY TO BECOME MORE MARKED WHILE MOVING WEST-NORTHWESTWARDS DURING NEXT 48 HOURS.

MOST OF THE MODELS LIKE IMD GFS, GEFS, IMD GPP, NCUM, NEPS, NCUM (REGIONAL) AND ECMWF ARE INDICATING PERSISTENCE OF THE LOW PRESSURE AREA OVER EASTCENTRAL AS WITH VERY SLOW WEST-NORTHWESTWARD MOVEMENT DURING NEXT 4-5 DAYS. ONLY NCUM GROUP OF MODELS ARE INDICATING A DEEPENING AND HENCE MARGINAL INTENSIFICATION DURING 0000 UTC OF 19TH TILL 0000 UTC OF 20TH NOVEMBER OVER EAST-CENTRAL AS.

UNDER THESE CONDITIONS THE LOW PRESSURE AREA OVER EASTCENTRAL AS OFF KARNATAKA COAST IS LIKELY TO MOVE WEST-NORTHWESTWARDS & BECOME MORE MARKED DURING NEXT 48 HOURS .

NEXT MESSAGE WILL BE ISSUED AT 0600 UTC OF 17TH NOVEMBER, 2021.

