

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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 23.12.2022

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2030 UTC OF 23.12.2022 BASED ON 1800 UTC OF 23.12.2022.

BAY OF BENGAL:

SUB: DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF THE 23RD DECEMBER OVER THE SAME REGION NEAR LATITUDE 10.6°N AND LONGITUDE 85.4°E ABOUT 510 KM EAST-NORTHEAST OF TRINCOMALEE (SRI LANKA, 43418), 610 KM EAST OF NAGAPPATTINAM (TAMIL NADU, 43347) AND 630 KM EAST-SOUTHEAST OF CHENNAI (TAMIL NADU, 43279).

IT IS LIKELY TO MOVE SLOWLY OVER SOUTHWEST BAY OF BENGAL, MAKE A LOOP OVER THE SAME REGION AND THEN MOVE WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING NEXT 48 HOURS.

AS PER INSAT-3D IMAGERY, INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH & ADJOINING CENTRAL BAY OF BENGAL BETWEEN LAT 10.0°N TO 17.0°N LONG 83.0°E TO 91.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL AND ALONG & OFF TAMILNADU & SRILANKA COASTS.

ARABIAN SEA:

THE EXISTING DEPRESSION IS LIKELY TO EMERGE INTO COMORIN AREA AROUND 26TH DECEMBER AND MOVE WEST-NORTHWESTWARDS THEREAFTER TOWARDS SOUTHEAST ARABIAN SEA.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER SOUTH PARTS OF SOUTH ARABIAN SEA AND SOUTH COMORIN AREA.

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	MOD	LOW	LOW

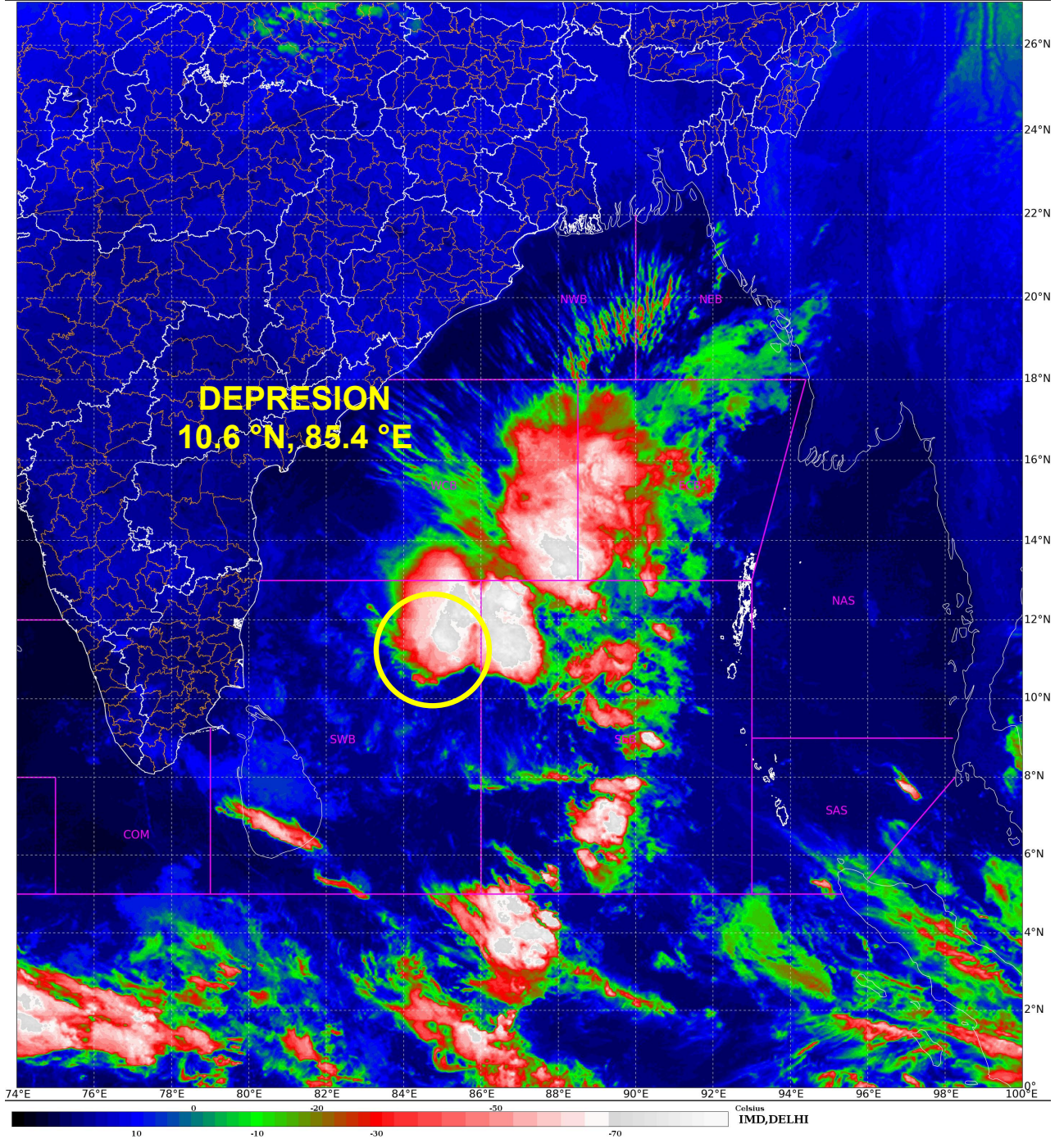
Remarks:

SEA SURFACE TEMPERATURE IS ABOUT 27°C OVER SOUTHWEST BOB AND ADJOINING EQUATORIAL INDIAN OCEAN. MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 6 WITH AMPLITUDE MORE THAN 1. THE EQUATORIAL WAVES PREDICTION INDICATES STRONG EASTERLY WINDS (5-7 MPS) OVER SOUTH & ADJOINING CENTRAL BAY OF BENGAL, STRONG WESTERLY WINDS (5-7 MPS) OVER SOUTH & ADJOINING EAST EQUATORIAL INDIAN OCEAN, LOW FREQUENCY BACKGROUND WAVES OVER SOUTH BAY OF BENGAL ARE LIKELY TO PREVAIL DURING NEXT 3-4 DAYS, THUS FAVOURING ENHANCEMENT OF CONVECTIVE ACTIVITY OVER SOUTH BAY OF BENGAL DURING NEXT 2-3 DAYS. LOW LEVEL RELATIVE VORTICITY IS AROUND $(25-50) \times 10^{-6} \text{ S}^{-1}$ OVER THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ABOUT $(10-20) \times 10^{-5} \text{ S}^{-1}$ TO THE EAST-NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT $(10-20) \times 10^{-5} \text{ S}^{-1}$ AND FOUND ELONGATED TO THE EAST-NORTHEAST AND SOUTHEAST OF SYSTEM CENTRE. VERTICAL WIND SHEAR OF 10-20 KNOTS IS PREVAILING TO THE NORTHEAST OF SYSTEM CENTRE BUT HIGH (AROUND 25-30 KNOTS) WIND SHEAR IS PREVAILING TO THE WEST OF THE SYSTEM. CURRENT DYNAMIC PARAMETERS OF ENVIRONMENT INDICATE WEAKENING OF THE SYSTEM.

MOST OF THE MODELS (IMD GFS & NCUM GROUP, IMD MME AND ECMWF) ARE INDICATING EXISTING DEPRESSION OVER SOUTHWEST BAY OF BENGAL TO MOVE GRADUALLY WEST-SOUTHWESTWARDS REACHING COMORIN AREA BY 26TH/0000 UTC ACROSS NORTH PARTS OF SRI LANKA. MODELS ARE NOT INDICATING FURTHER INTENSIFICATION OF THE SYSTEM. THE MODELS ARE ALSO PREDICTING POSSIBLE EMERGENCE OF THE SYSTEM OVER THE ARABIAN SEA AND INDICATING THE WEST-NORTHWESTWARDS MOVEMENT AND GRADUAL WEAKENING.

IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS LIKELY TO MOVE SLOWLY OVER SOUTHWEST BAY OF BENGAL, MAKE A LOOP OVER THE SAME REGION AND THEN MOVE WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING NEXT 48 HOURS.

SHASHI KANT
SCIENTIST-C
RSMC, NEW 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%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 23rd DECEMBER, 2022



DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

D: DEPRESSION (17-27 KT)

DD: DEEP DEPRESSION (28-33 KT)

CS: CYCLONIC STORM (34-47 KT)

SCS: SEVERE CYCLONIC STORM (48-63KT)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM (≥20 KT)

LESS THAN 34 KT

34-47 KT

≥ 48 KT

OBSERVED TRACK

FORECAST TRACK

CONE OF UNCERTAINTY

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Fishermen warning graphics



Squally WX with wind speed 40-50 kmph gusting to 60 kmph
Squally wind speed 45-55 kmph gusting to 65 kmph

<b style="color: red;">Fishermen are advised not to venture into the marked areas.
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