



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

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**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 0900 UTC OF 23.12.2022 BASED ON 0600 UTC OF 23.12.2022.**

**BAY OF BENGAL:**

**SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL**

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED EAST-NORTHEASTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 23<sup>RD</sup> DECEMBER OVER THE SAME REGION NEAR LATITUDE 10.3°N AND LONGITUDE 85.0°E ABOUT 450 KM EAST-NORTHEAST OF TRINCOMALEE (SRI LANKA, 43418), 570 KM EAST OF NAGAPPATTINAM (INDIA, 43347) AND 600 KM EAST-SOUTHEAST OF CHENNAI (INDIA, 43279).

IT IS LIKELY TO MOVE SLOWLY, 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 AND ADJOINING CENTRAL BAY OF BENGAL BETWEEN 9.0 & 17.0°N AND LONGITUDE 83.0E & 91.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 87°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 BAY OF BENGAL AND ALONG & OFF TAMILNADU & SRILANKA COASTS.

**ARABIAN SEA:**

THE EXISTING DEPRESSION IS LIKELY TO EMERGE INTO COMORIN AREA AROUND 26<sup>TH</sup> 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

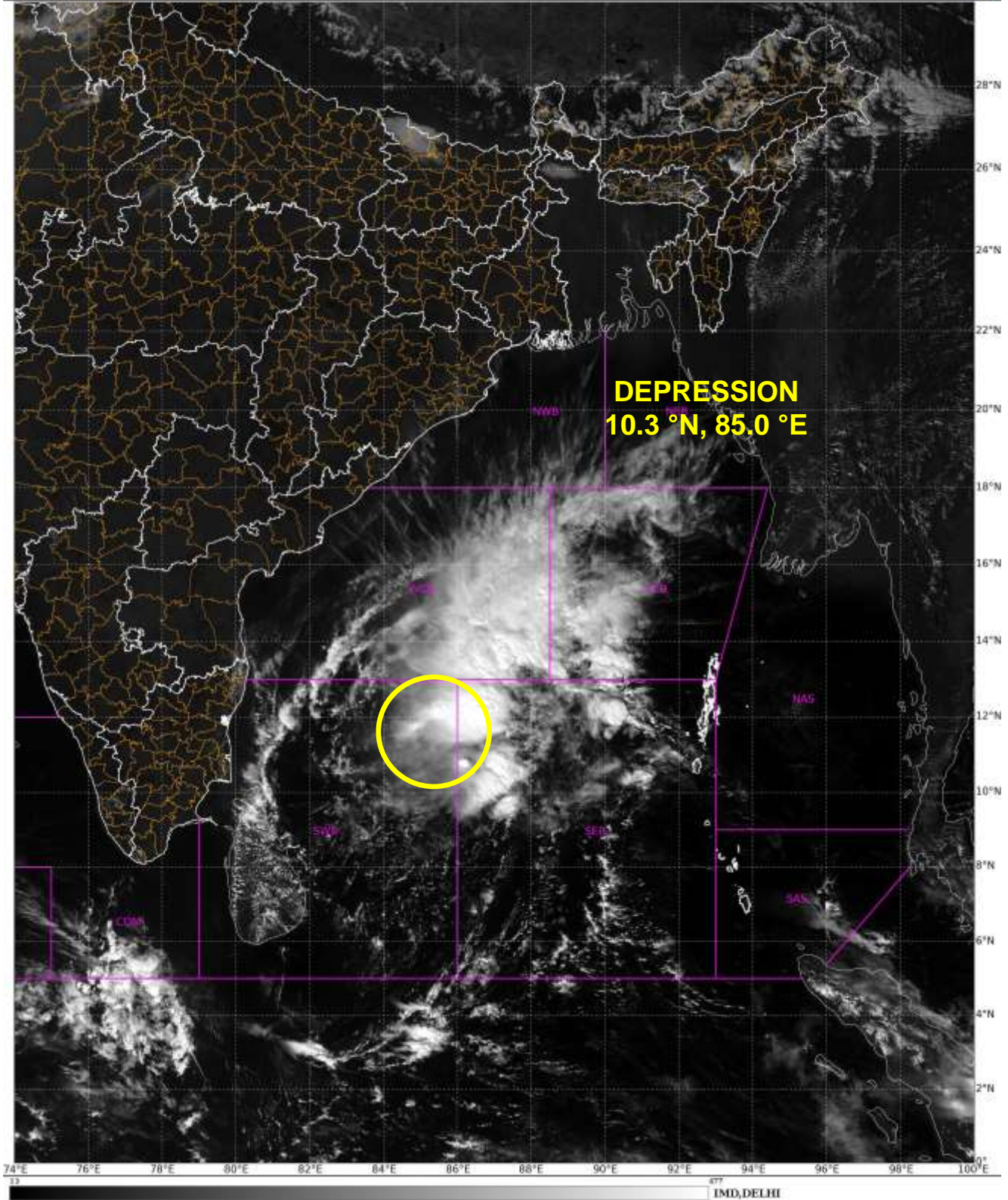
**Remarks:**

SEA SURFACE TEMPERATURE IS ABOUT 27-28°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  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ABOUT  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{ S}^{-1}$  AND FOUND ELONGATED TO THE NORTHEAST OF SYSTEM CENTRE. MODERATE (15-20 KNOTS) VERTICAL WIND SHEAR IS PREVAILING TO THE EAST OF SYSTEM CENTRE BUT HIGH (AROUND 25 KNOTS) WIND SHEAR IS PREVAILING TO THE WEST OF THE SYSTEM. CURRENT CONDITIONS INDICATE THAT THE SYSTEM IS PRESENTLY IN A FAVORABLE ENVIRONMENT BUT FURTHER INTENSIFICATION IS NOT INDICATED DUE TO INCREASE IN VERTICAL WIND SHEAR AHEAD AND SURROUNDING 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 26<sup>TH</sup>/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 BAY OF BENGAL IS LIKELY TO MOVE SLOWLY, MAKE A LOOP OVER THE SAME REGION AND THEN MOVE WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING NEXT 48 HOURS.

SHIBIN BALAKRISHNAN  
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 BAY OF BENGAL BASED ON 0600 UTC OF 23<sup>rd</sup> 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 ( $\geq 20$  KT)**

- LESS THAN 34 KT
- 34-47 KT
- $\geq 48$  KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

## 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

**Fishermen are advised not to venture into the marked areas.**

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