



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

DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 22.12.2022

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 22.12.2022 BASED ON 0600 UTC OF 22.12.2022.

BAY OF BENGAL:

THE DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 3 HOURS AND LAY CENTERED AT 0600 UTC OF TODAY, THE 22ND DECEMBER OVER THE SAME REGION NEAR LATITUDE 9.5°N AND LONGITUDE 84.8°E ABOUT 400 KM EAST-NORTHEAST OF TRINCOMALEE (SRI LANKA, 43418), 550 KM EAST-SOUTHEAST OF NAGAPPATTINAM (TAMIL NADU, 43347) AND 630 KM SOUTHEAST OF CHENNAI (TAMIL NADU, 43279).

IT IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 24 HOURS AND THEREAFTER GRADUALLY RECURVE WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING SUBSEQUENT 48 HOURS.

AS PER INSAT-3D IMAGERY, CLOUD MASS HAS ORGANISED IN PAST 24 HOURS. INTENSITY OF THE SYSTEM IS T 1.5. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTHWEST ADJOINING SOUTHEAST & CENTRAL BAY OF BENGAL AND SOUTH ANDAMAN SEA. MINIMUM CTT MINUS 93 DEG CEL. MULTISATELLITE WINDS INDICATE STRONGER WINDS IN THE NORTHEAST SECTOR.

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 26TH DECEMBER AND MOVE WEST-NORTHWESTWARDS THEREAFTER TOWARDS SOUTHEAST ARABIAN SEA.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTHEAST & ADJOINING SOUTHWEST ARABIAN SEA & 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	NIL	LOW	LOW

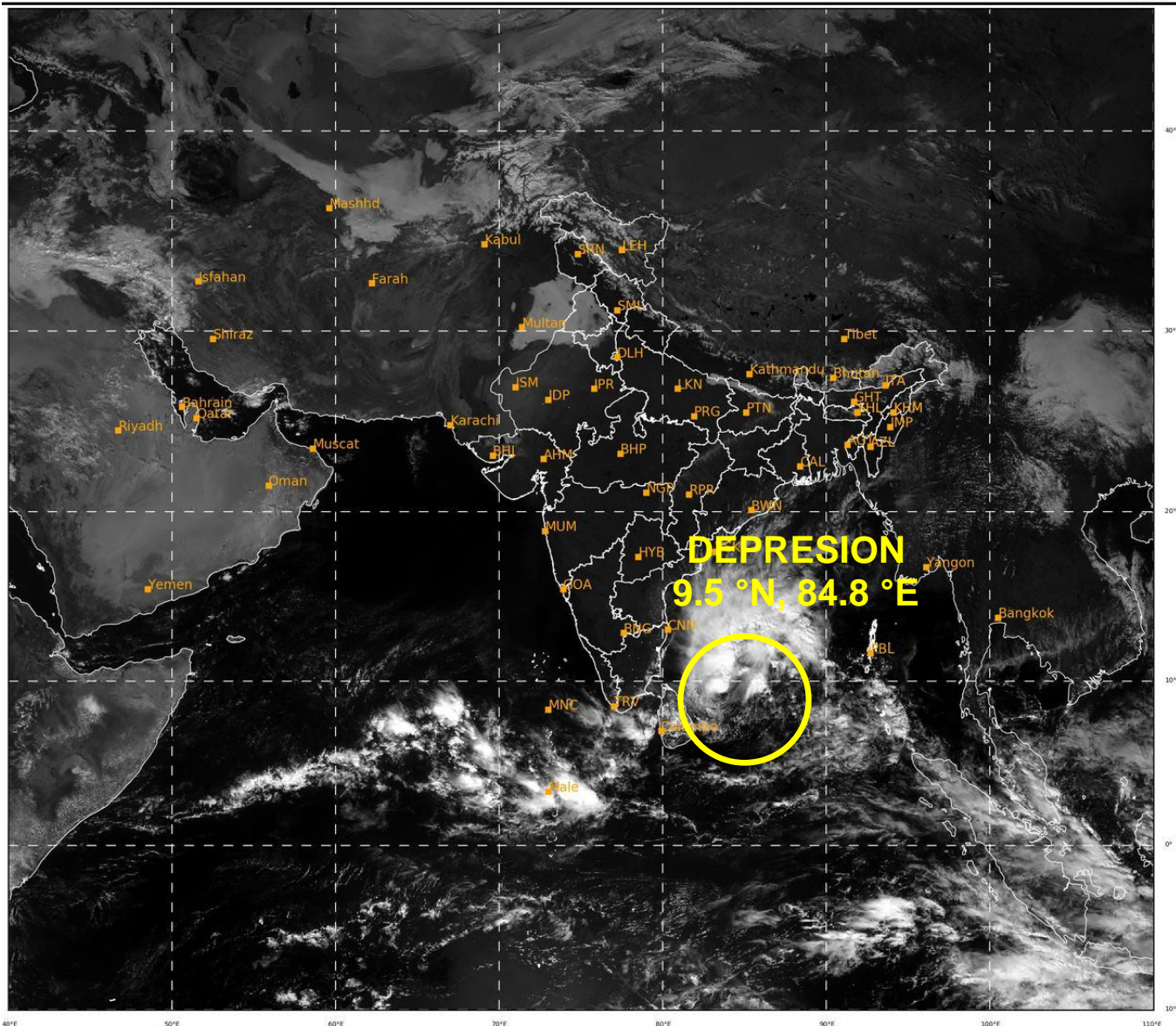
Remarks:

SEA SURFACE TEMPERATURE IS ABOUT 28-29°C OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN. MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 5 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. LOW LEVEL RELATIVE VORTICITY HAS INCREASED SIGNIFICANTLY DURING PAST 24 HOURS AND IS AROUND $100 \times 10^{-6} \text{ S}^{-1}$ TO THE SOUTH OF SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS ALSO INCREASED DURING PAST 24 HOURS AND IS ABOUT $50 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS INCREASED AND IS ABOUT $40 \times 10^{-5} \text{ S}^{-1}$ TO THE NORTH-NORTHWEST OF SYSTEM CENTRE. LOW (05-10 KNOTS) VERTICAL WIND SHEAR IS PREVAILING AROUND SYSTEM AREA OVER SOUTHWEST BOB. CURRENT CONDITIONS INDICATE THAT THE SYSTEM IS IN A FAVORABLE ENVIRONMENT. HOWEVER, DUE TO INCREASE IN VERTICAL WIND SHEAR BEYOND 12°N/82°E, FURTHER INTENSIFICATION INTO A CYCLONIC STORM IS NOT LIKELY.

MOST OF THE MODELS (GFS & NCUM GROUP, IMD MME AND ECMWF) ARE INDICATING EXISTING DEPRESSION OVER SOUTHWEST BAY OF BENGAL TO MOVE NORTH-NORTHWESTWARDS TILL BY 23RD /0000 UTC OVER SOUTHWEST BAY OF BENGAL. THEREAFTER, MODELS ARE INDICATING GRADUAL WEST-SOUTHWESTWARDS MOVEMENT OF THE SYSTEM REACHING COMORIN AREA BY 26TH/0000 UTC. MODELS ARE NOT INDICATING FURTHER INTENSIFICATION OF THE SYSTEM. OVER THE ARABIAN SEA, MODELS ARE INDICATING THE SYSTEM TO MOVE WEST-NORTHWESTWARDS AND WEAKEN GRADUALLY.

IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL IS LIKELY TO CONTINUE TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 24 HOURS AND THEREAFTER GRADUALLY RECURVE WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING SUBSEQUENT 48 HOURS.

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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 22ND DECEMBER, 2022

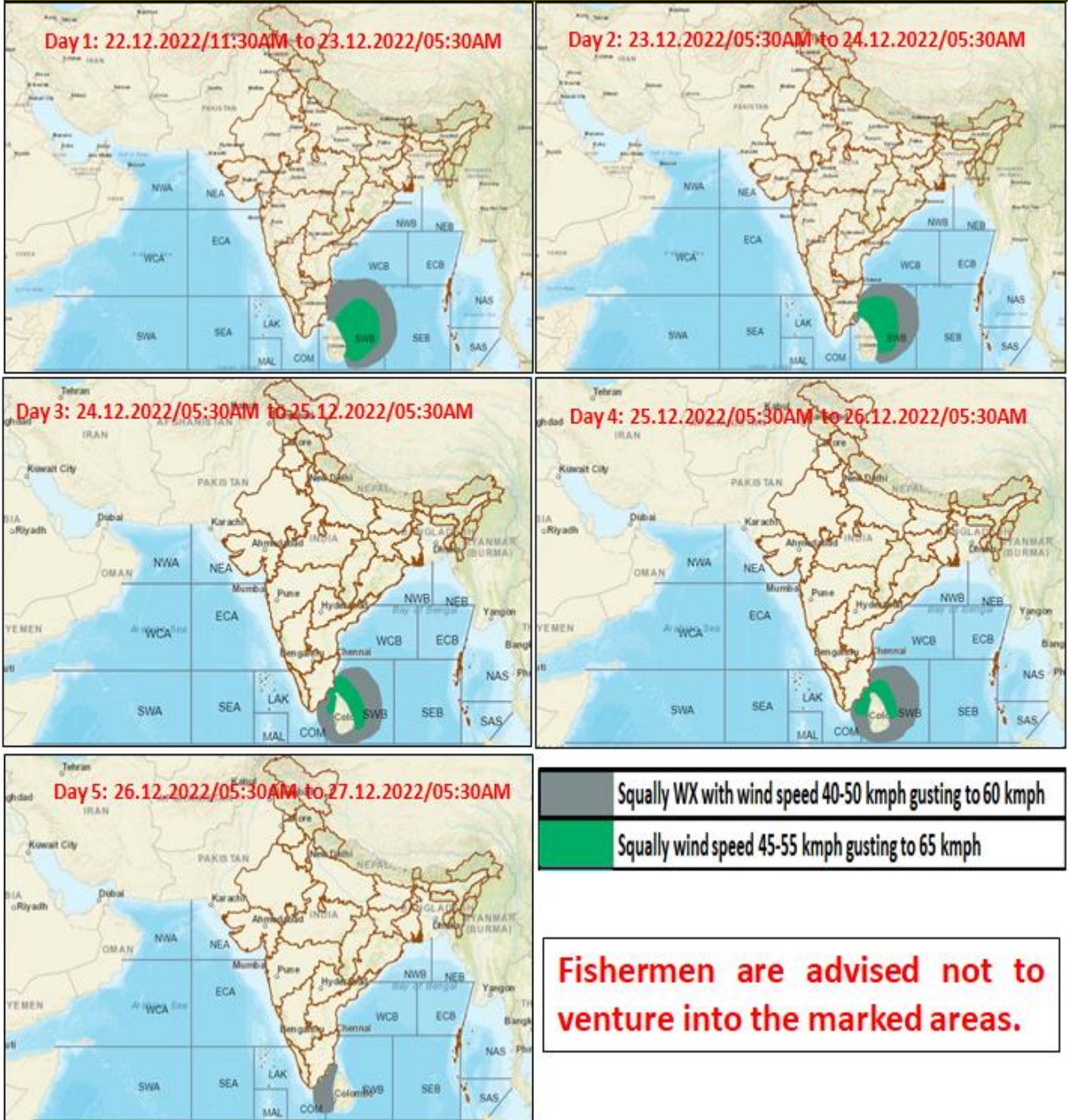


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (\geq 120 KT)

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

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%
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