



**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 0300 UTC OF 23.12.2022 BASED ON 0000 UTC OF 23.12.2022.

BAY OF BENGAL:

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY DURING PAST 06 HOURS AND LAY CENTERED AT 0000 HOURS IST OF TODAY, THE 23RD DECEMBER OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 10.1°N AND LONGITUDE 84.2°E ABOUT 370 KM EAST-NORTHEAST OF TRINCOMALEE (SRI LANKA, 43418), 480 KM EAST OF NAGAPPATTINAM (INDIA, 43347) AND 540 KM EAST-SOUTHEAST OF CHENNAI (INDIA, 43279).

IT IS LIKELY TO MOVE GRADUALLY WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS SRI LANKA DURING NEXT 48 HOURS.

AS PER INSAT-3D IMAGERY, INTENSITY OF THE SYSTEM IS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST AND ADJOINING CENTRAL BAY OF BENGAL ARE OBSERVED. 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 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 NORTHWEST & SOUTH ARABIAN SEA AND COMORIN AREA. ISOLATED WEAK TO MODERATE CONVECTION OVER NORTHEAST & EASTCENTRAL ARABIAN SEA ARE OBSERVED.

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

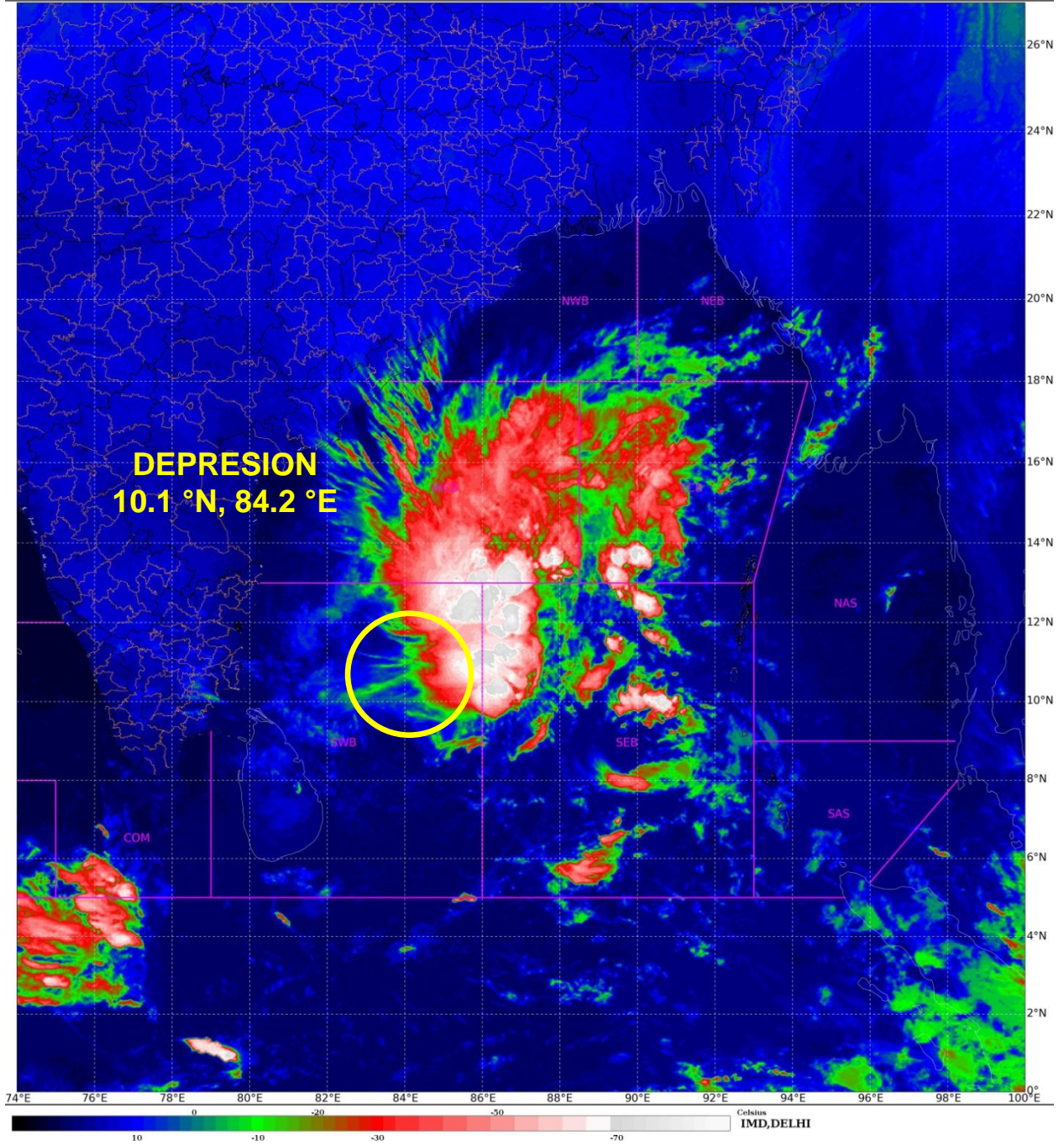
Remarks:

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. LOW LEVEL RELATIVE VORTICITY IS AROUND $100 \times 10^{-6} \text{ S}^{-1}$ OVER THE 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 $10 \times 10^{-5} \text{ S}^{-1}$ AND FOUND ELONGATED TO THE NORTHEAST OF SYSTEM CENTRE. LOW (5-10 KNOTS) VERTICAL WIND SHEAR IS PREVAILING TO THE EAST OF SYSTEM CENTRE BUT HIGH (AROUND 25 KNOTS) WIND SHEAR IS PREVAILING WEST AND SOUTHWEST 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 (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 PART 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 RECURVE GRADUALLY WEST-SOUTHWESTWARDS TOWARDS COMORIN AREA ACROSS NORTH PART OF SRI LANKA DURING SUBSEQUENT 48 HOURS.

ANANDA KUMAR DAS
SCIENTIST-E
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 0000 UTC OF 23rd DECEMBER, 2022

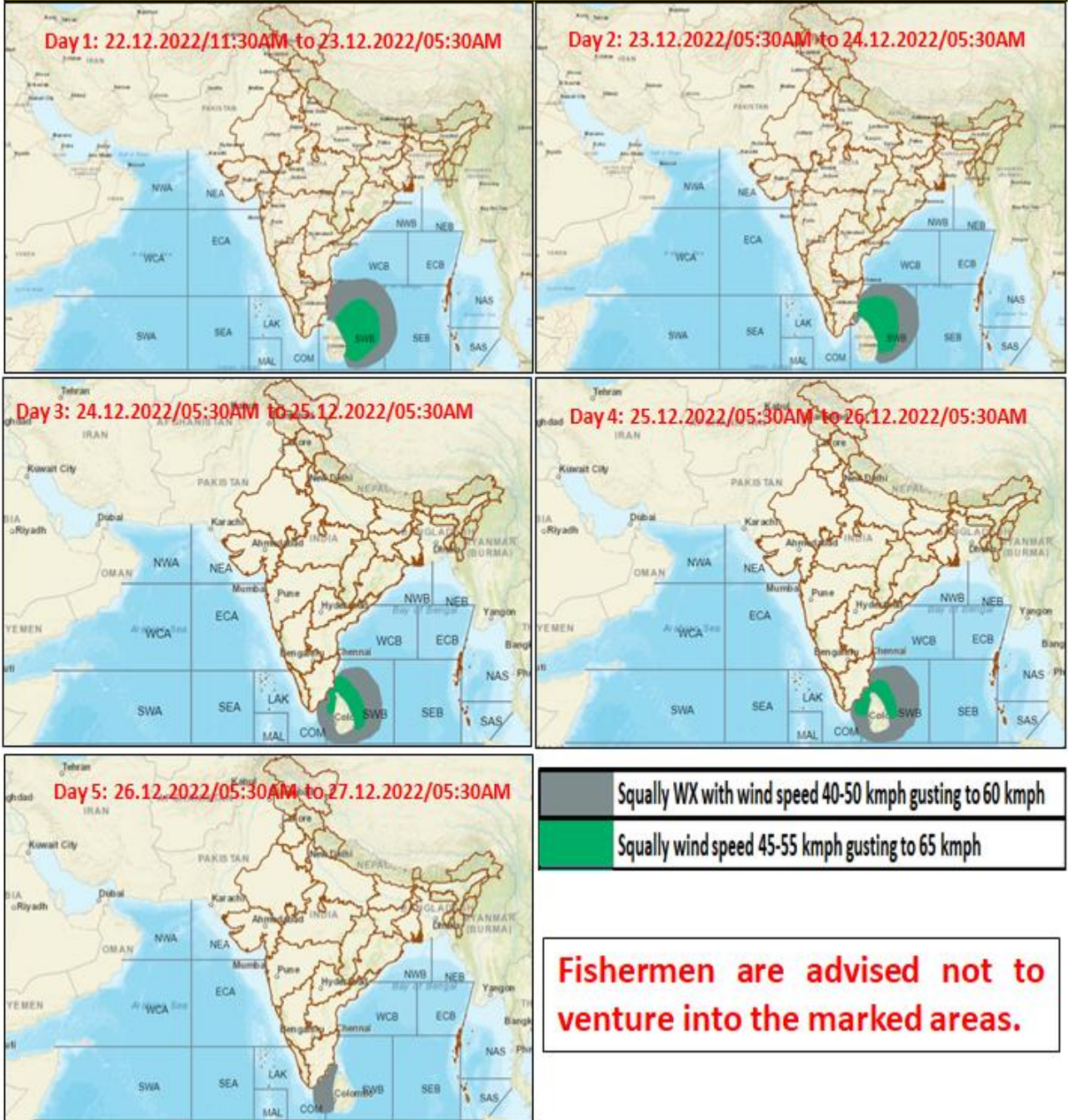


DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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

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

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Fishermen warning graphics



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