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 1930 UTC OF 22.12.2022 BASED ON 1800 UTC OF 22.12.2022.

BAY OF BENGAL:

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE **DEPRESSION** OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 08 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC OF TODAY, THE 22ND 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 (TAMIL NADU, 43347) AND 540 KM EAST-SOUTHEAST OF CHENNAI (TAMIL NADU, 43279).

IT IS LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS FOR SOME MORE TIME AND GRADUALLY RECURVE WEST-SOUTHWESTWARDS FROM 23RD MORNING TOWARDS COMORIN AREA ACROSS SRI LANKA DURING SUBSEQUENT 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 SOUTHEAST & CENTRAL BAY OF BENGAL. 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 INTENSE TO VERY INTENSE CONVECTION OVER CENTRAL PARTS OF SOUTH ARABIAN SEA. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION OVER NORTHWEST & REST SOUTH ARABIAN SEA AND 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	MOD	LOW

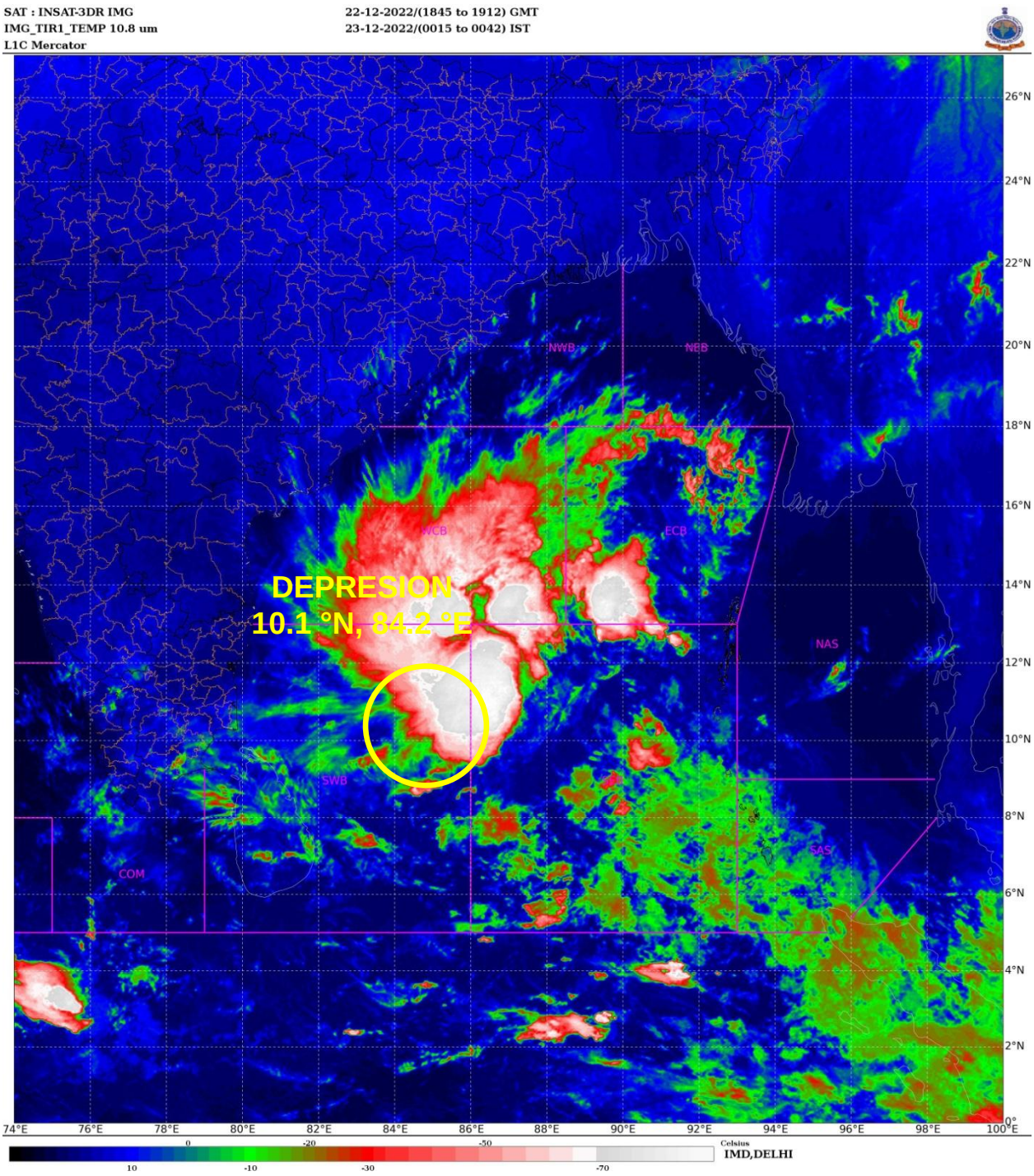
Remarks:

SEA SURFACE TEMPERATURE IS ABOUT 28-29°C OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN. MADDEN JULIAN OSCILLATION INDEX IS IN PHASE 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 $100X10^{-6}$ S^{-1} OVER THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS ABOUT $30X10^{-5}$ S^{-1} TO THE NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT $30X10^{-5}$ S^{-1} TO THE NORTHEAST OF SYSTEM CENTRE. LOW (5-10 KNOTS) VERTICAL WIND SHEAR IS PREVAILING TO THE NORTHEAST OF SYSTEM CENTRE. 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 23^{RD}/0000 UTC OVER SOUTHWEST BAY OF BENGAL. THEREAFTER, MODELS ARE INDICATING GRADUAL WEST-SOUTHWESTWARDS MOVEMENT OF THE SYSTEM REACHING COMORIN AREA BY 26^{TH}/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 BAY OF BENGAL IS LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS FOR SOME MORE TIME AND GRADUALLY RECURVE WEST-SOUTHWESTWARDS FROM 23^{RD} MORNING TOWARDS COMORIN AREA ACROSS SRI LANKA DURING SUBSEQUENT 48 HOURS.

KRISHNA MISHRA
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%
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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 1800 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 (≥ 120 KT)

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

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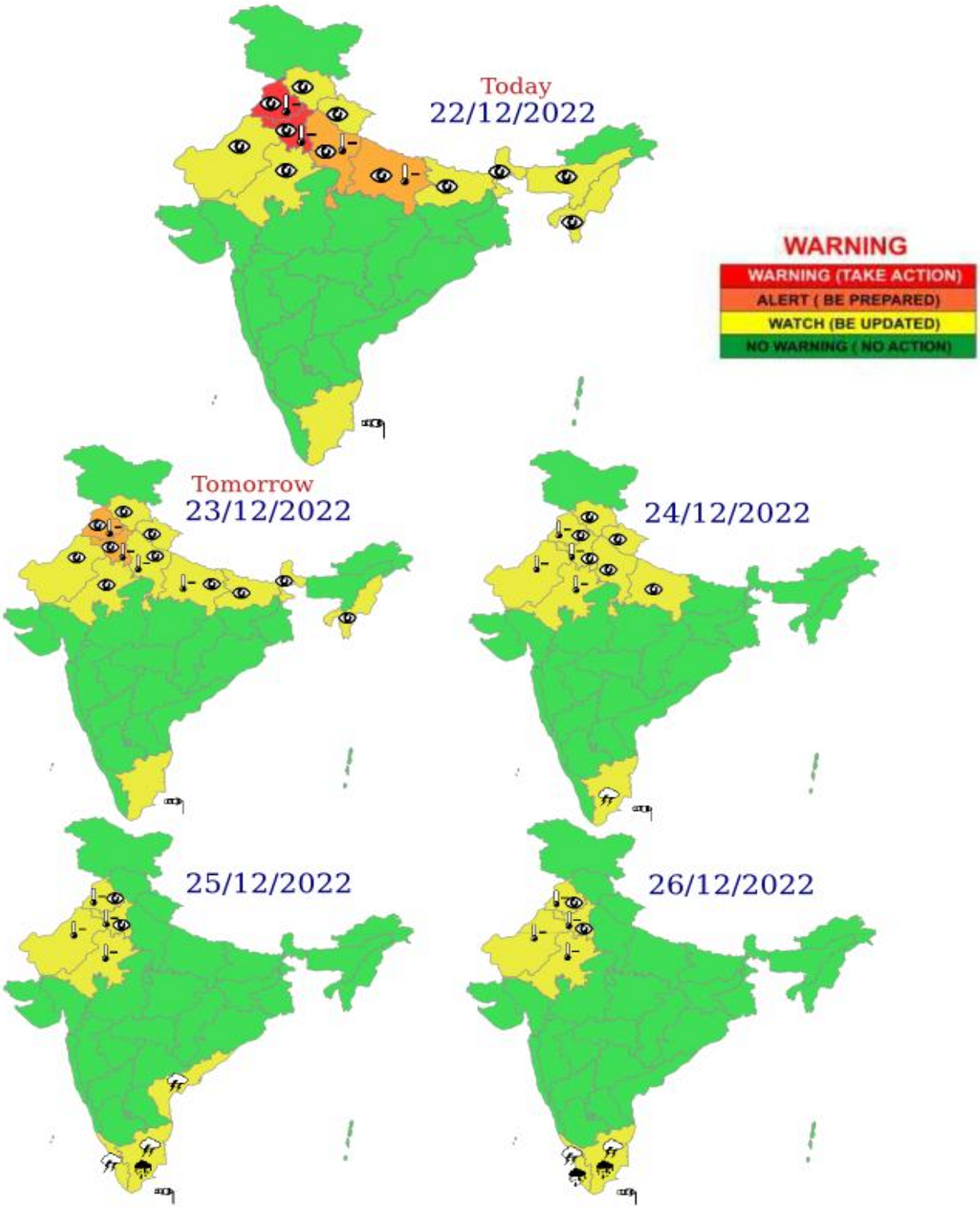
WEATHER WARNING GRAPHICS



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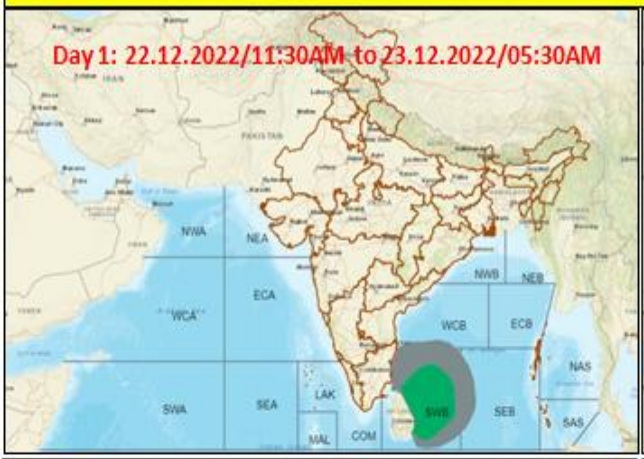
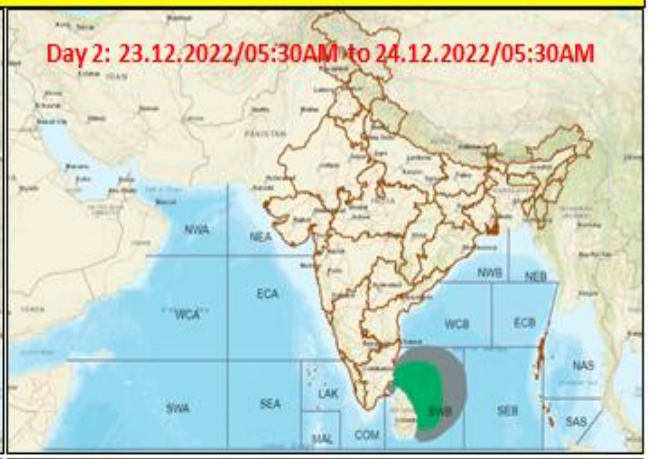
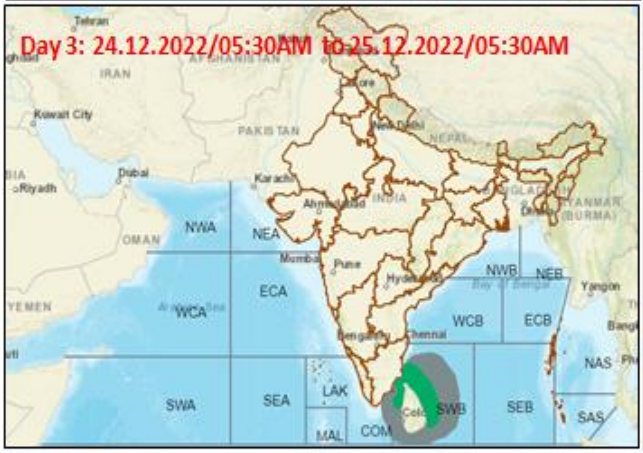
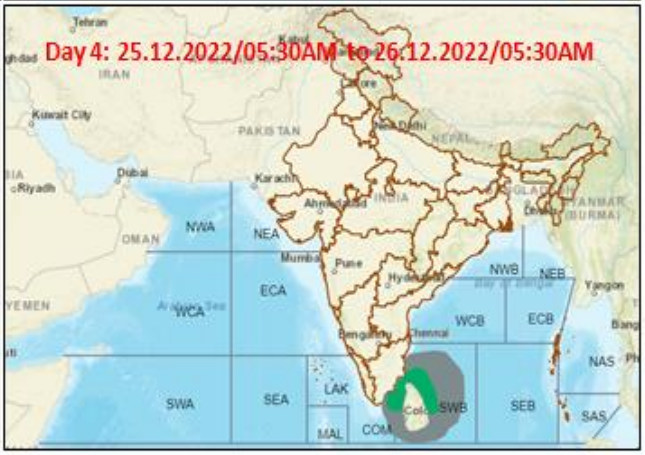
Fishermen warning graphics









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

Squally wind speed 45-55 kmph gusting to 65 kmph

Fishermen are advised not to venture into the marked areas.

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