



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 02.02.2023

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300UTC OF 02.02.2023 BASED ON 0000 UTC OF 02.02.2023.

SUB: DEPRESSION OVER SRI LANKA

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARDS WITH A SPEED OF 15 KMPH AND CROSSED SRI LANKA COAST BETWEEN BATTICALOA (SRI LANKA, 43436) AND TRINCOMALEE (SRI LANKA, 43418) NEAR LATITUDE 7.8°N AND LONGITUDE 81.6°E DURING 2200 TO 2300 UTC OF 1ST FEBRUARY, 2023 AS A DEPRESSION WITH ESTIMATED MAXIMUM SUSTAINED WIND SPEED OF 45-55 GUSTING TO 65 KMPH. THEREAFTER, CONTINUING TO MOVE WEST-SOUTHWESTWARDS IT LAY CENTERED AT 0000 UTC OF TODAY 2ND FEBRUARY OVER SRI LANKA NEAR LATITUDE 7.6°N AND LONGITUDE 81.4°E, ABOUT 30 KM SOUTHWEST OF BATTICALOA (SRI LANKA 43436), 120 KM SOUTH-SOUTHEAST OF TRINCOMALEE (SRI LANKA 43418).

IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-SOUTHWESTWARDS ACROSS SOUTH SRI LANKA AND EMERGE INTO COMORIN AND ADJOINING GULF OF MANNAR OFF WEST COAST OF SRI LANKA DURING 1800 TO 0000 UTC 03RD FEBRUARY 2023.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
02.02.23/0000	7.6/81.4	45-55 GUSTING TO 65	DEPRESSION
02.02.23/1200	7.0/80.4	40-50 GUSTING TO 60	DEPRESSION
03.02.23/0000	6.4/79.4	35-45 GUSTING TO 55	DEPRESSION

INTENSITY OF THE SYSTEM IS CHARACTERIZED AS T 1.5. ASSOCIATED WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTH-WEST BAY & EAST TAMILNADU, NORTH SRI LANKA AND PALK STRAIT. MODERATE TO INTENSE CONVECTION IS SEEN OVER GULF OF MANNAR. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93⁰C.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1004 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHWEST BOB.

REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE AROUND 2. IT WILL CONTINUE IN SAME PHASE WITH SIMILAR INCREASED AMPLITUDE DURING NEXT 6 DAYS. MJO INDEX IS THUS CONDUCIVE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL (BOB) AND MAINTENANCE OF INTENSITY OF THE SYSTEM. THE CFS BASED FORECAST FOR EQUATORIAL WAVES INDICATE STRONG

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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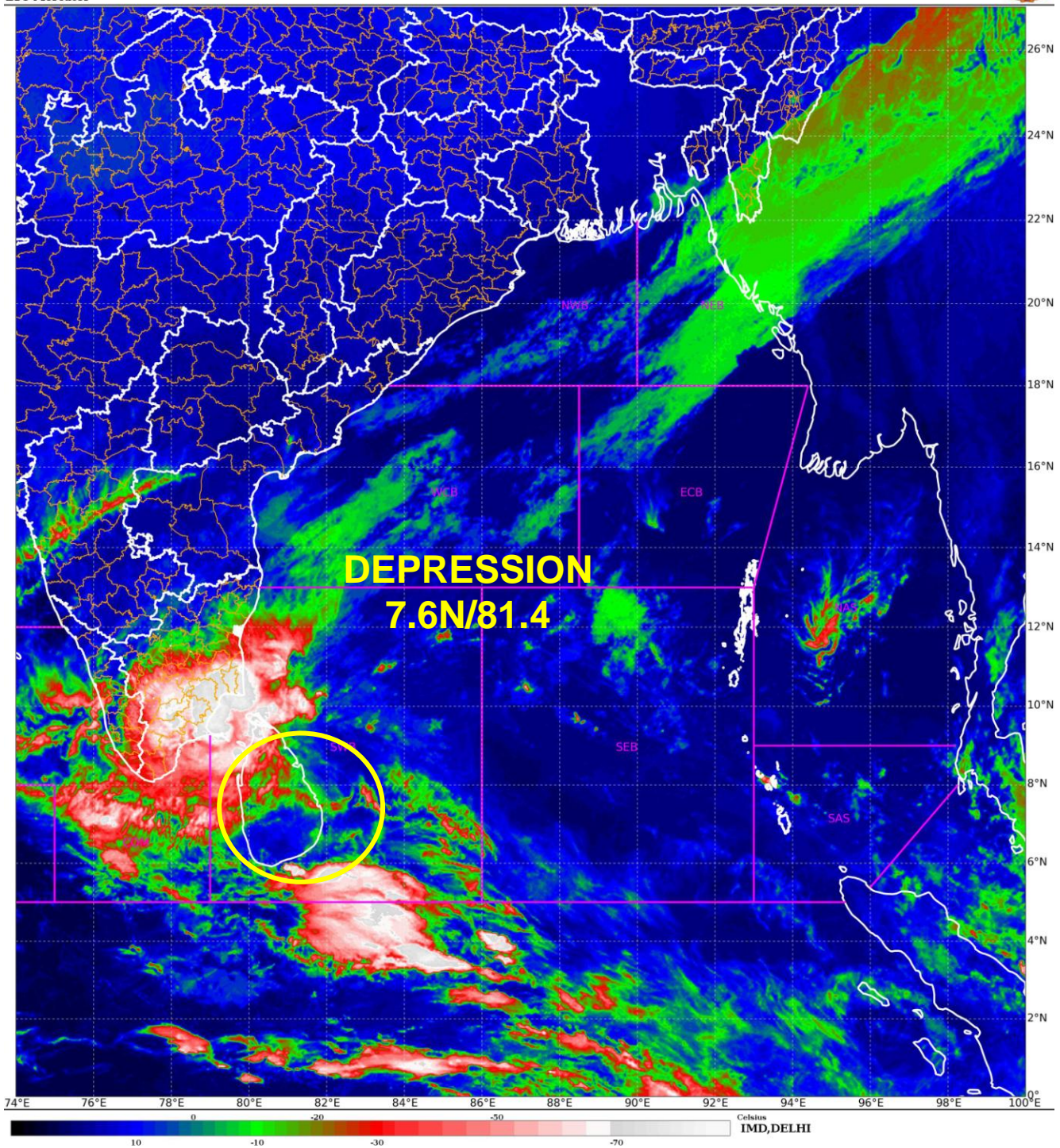
EASTERLY WINDS (5-7 MPS) OVER SOUTH BOB, STRONG WESTERLY WINDS (5-7 MPS) OVER EQUATORIAL INDIAN OCEAN (EIO) ALONGWITH KELVIN WAVES, MJO AND EQUATORIAL ROSSBY WAVES OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BOB ON 1ST FEBRUARY. ALL THESE EQUATORIAL WAVES ARE CONTRIBUTING TOWARDS MAINTENANCE OF INTENSITY OF THE SYSTEM AND SLOW WEAKENING AFTER LANDFALL.

SEA SURFACE TEMPERATURE (SST) IS AROUND 27°C OVER SOUTHWEST BOB AND ADJOINING EQUATORIAL INDIAN OCEAN (EIO). LOW LEVEL VORTICITY IS ABOUT $100 \times 10^{-6} \text{ S}^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTER. LOW LEVEL CONVERGENCE IS $20 \times 10^{-5} \text{ S}^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS AROUND $20 \times 10^{-5} \text{ S}^{-1}$ TOWARDS NORTH & WEST OF THE SYSTEM CENTER. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND SYSTEM CENTRE AND IS INCREASING ALONG FORECAST TRACK (30-40 KNOTS). THE UPPER TROPOSPHERIC RIDGE IS SEEN ALONG 13.0°N OVER THE BOB. THE TROUGH IN WESTERLY AT 400 HPA LEVEL WITH AXIS RUNNING ALONG 85°E UPTO 28°N. THE SYSTEM IS OVER THE LAND. DUE TO INCREASING WIND SHEAR ALONG THE TRACK AND LAND SURFACE FRICTION, IT WOULD LEAD TO WEAKENING OF THE SYSTEM.

MOST OF THE MODELS INCLUDING IMD GFS, NCUM AND ECMWF ARE INDICATING, SYSTEM LIKELY TO CONTINUE TO MOVE NEARLY WEST-SOUTHWESTTWARDS MOVEMENT AND ACROSS SOUTH SRI LANKA AND EMERGE INTO COMORIN AND ADJOINING GULF OF MANNAR OFF WEST COAST OF SRI LANKA.

IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SRI LANKA IS VERY LIKELY TO CONTINUE TO MOVE WEST-SOUTHWESTWARDS ACROSS SOUTH SRI LANKA AND EMERGE INTO COMORIN AND ADJOINING GULF OF MANNAR OFF WEST COAST OF SRI LANKA DURING 1800 TO 0000 UTC 03RD FEBRUARY 2023.

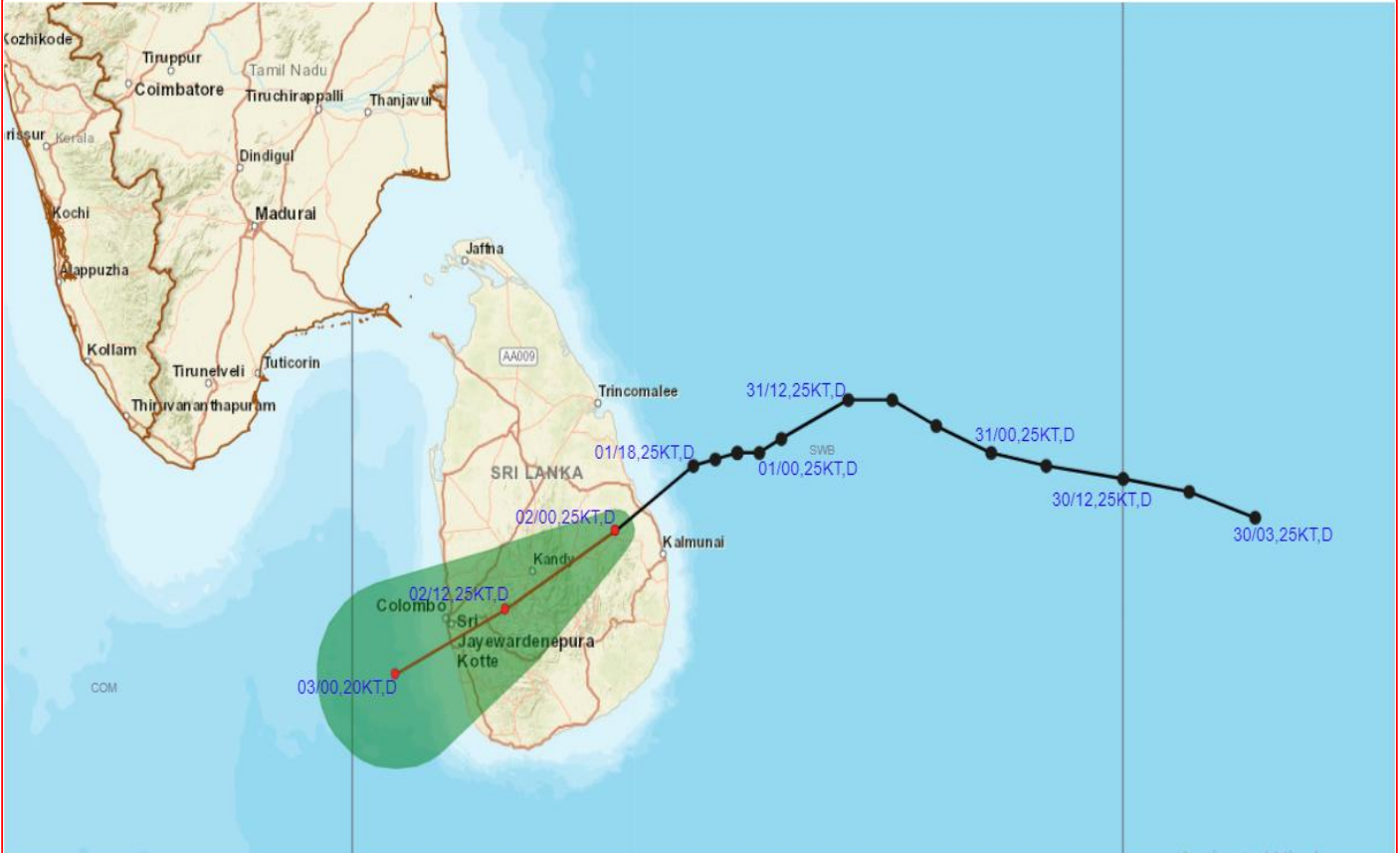
(S. P SINGH)
RSMC, NEW DELHI



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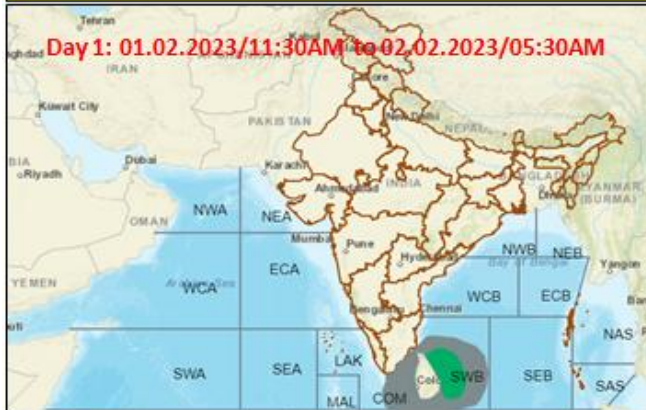
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SRI LANKA BASED ON 0000 UTC OF 2ND FEBRUARY, 2023.



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

Fishermen warning graphics



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