



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 01.02.2023

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0630 UTC OF 01.02.2023 BASED ON 0300 UTC OF 01.02.2023.

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARDS WITH A SPEED OF 03 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0300 UTC OF TODAY, THE 1ST FEBRUARY, 2023 OVER THE SAME REGION NEAR LATITUDE 8.2°N AND LONGITUDE 82.6°E, 110 KM EAST-SOUTHEAST OF BATTICALOA (SRI LANKA, 43436), 160 KM EAST-EASTSOUTHEAST OF TRINCOMALEE (SRI LANKA, 43418), AND 420 KM SOUTHEAST OF KARAİKAL (INDIA, 43346).

IT IS VERY LIKELY TO MOVE SLOWLY WEST-SOUTHWESTWARDS AND CROSS SRI LANKA COAST BETWEEN LATITUDE 7°N TO 8°N AROUND 1200 UTC OF 01ST 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
01.02.23/0300	8.2/82.6	45-55 GUSTING TO 65	DEPRESSION
01.02.23/1200	7.4/81.6	45-55 GUSTING TO 65	DEPRESSION
02.02.23/0000	6.5/80.7	40-50 GUSTING TO 60	DEPRESSION

INTENSITY OF THE SYSTEM IS CHARACTERIZED AS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST & ADJOINING WEST BAY OF BENGAL BETWEEN LATITUDE 8.5°N TO 13.0°N LONG 80.0°E TO 85.0°E AND NORTH SRI LANKA, PALK STRAIT AND GULF OF MANNAR. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

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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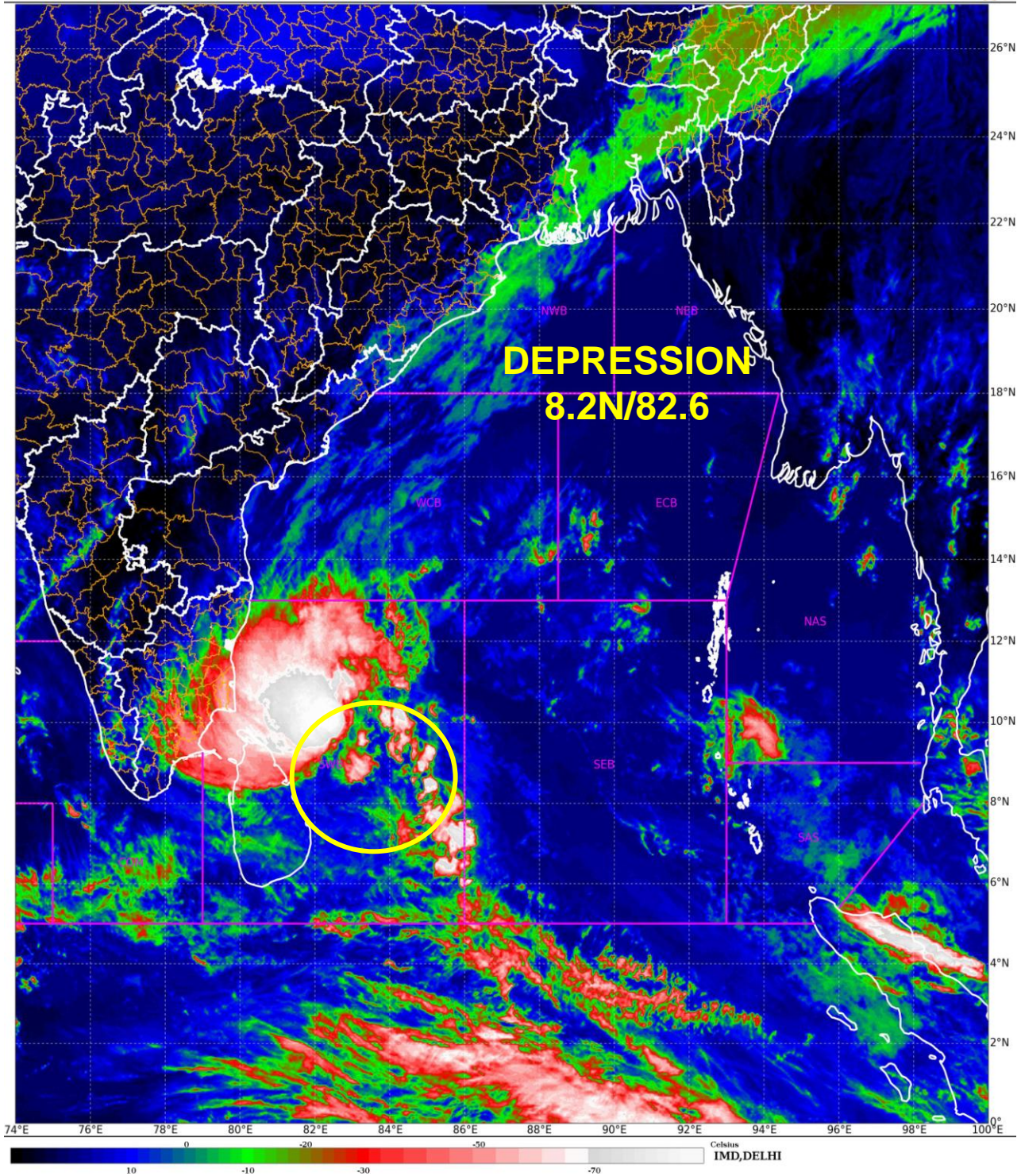
EASTERLY WINDS (5-7 MPS) OVER SOUTH BOB, STRONG WESTERLY WINDS (5-7 MPS) OVER EQUATORIAL INDIAN OCEAN (EIO) AND ADJOINING SOUTH BOB ALONGWITH KELVIN WAVES, MJO AND EQUATORIAL ROSSBY WAVES OVER EIO AND ADJOINING SOUTH BOB ON 31ST JANURAY. ALL THESE EQUATORIAL WAVES ARE CONTRIBUTING TOWARDS MAINTENANCE OF INTENSITY OF THE SYSTEM.

SEA SURFACE TEMPERATURE (SST) IS AROUND 27-28°C OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN (EIO). TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. LOW LEVEL VORTICITY OF $100 \times 10^{-6} \text{ S}^{-1}$ AROUND THE SYSTEM CENTER. LOW LEVEL CONVERGENCE IS $10 \times 10^{-5} \text{ S}^{-1}$ AROUND THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS $20 \times 10^{-5} \text{ S}^{-1}$ TO THE WEST-OF THE SYSTEM CENTER. WIND SHEAR IS LOW (10 KNOTS) AROUND SYSTEM CENTRE OVER SOUTHWEST BAY OF BENGAL, INCREASING ALONG ITS TRACK TO 20-30 KNOTS . THE UPPER TROPOSPHERIC RIDGE IS SEEN ALONG 15.0°N OVER THE BOB. THE SYSTEM IS PRESENTLY STEERED BY THE LOWER-MID LEVEL MEAN NORTHEASTERLY WINDS. THEREFORE, THE SYSTEM VERY LIKELY TO MOVE WEST-SOUTHWESTWARD TOWARDS SRI LANKA COAST. AS THE SYSTEM WOULD REACH NEAR COAST, DRY COLD AIR WOULD INTRUDE INTO THE SYSTEM AREA FROM SOUTH AND EASTERLY WIND SHEAR WOULD LEAD TO WEAKENING OF THE SYSTEM.

MOST OF THE MODELS INCLUDING IMD GFS, NCUM AND ECMWF ARE INDICATING THE WEST-SOUTHWESTWARDS TOWARDS SRI LANKA COAST AND CROSSING BETWEEN 7.0°N-8.0°N AROUND 1200 UTC OF 1ST FEBRUARY.

IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SOUTHWEST BOB IS VERY LIKELY TO MOVE WEST-SOUTHWESTWARDS AND CROSS SRI LANKA COAST BETWEEN LATITUDE 7°N TO 8°N AROUND 1200 UTC OF 01ST FEBRUARY 2023.

(DR RK JENAMANI)
RSMC, NEW DELHI



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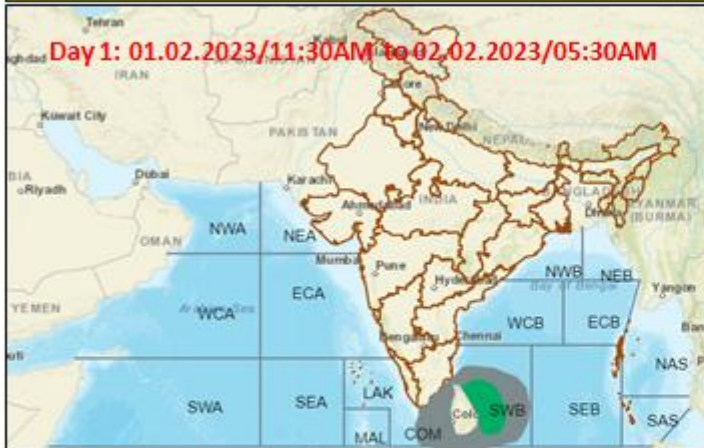
OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC OF 01st FEBRUARY, 2023.



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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