



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 30.01.2023**

**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 30.01.2023 BASED ON 1800 UTC OF 30.01.2023.**

**BAY OF BENGAL:**

THE DEPRESSION OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL MOVED NEARLY WEST-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC OF 30<sup>TH</sup> JANUARY, 2023 OVER THE SAME REGION NEAR LATITUDE 8.1°N AND LONGITUDE 85.3°E, ABOUT 455 KM EAST-SOUTHEAST OF TRINCOMALEE (SRI LANKA, 43418) AND 680 KM EAST-SOUTHEAST OF KARAIKAL (INDIA 43346).

IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TILL 0900 UTC OF 31<sup>ST</sup> JANUARY THEN RECURVE GRADUALLY SOUTH-SOUTHWESTWARDS AND CROSS SRI LANKA COAST AROUND 0600 UTC OF 01<sup>ST</sup> FEBRUARY 2023.

**Forecast track and intensity are given below:**

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.01.23/1800	8.1/85.3	45-55 GUSTING TO 65	DEPRESSION
31.01.23/0600	8.2/84.0	45-55 GUSTING TO 65	DEPRESSION
31.01.23/1800	7.8/82.9	45-55 GUSTING TO 65	DEPRESSION
01.02.23/0600	7.1/81.8	40-50 GUSTING TO 60	DEPRESSION
01.02.23/1800	6.4/80.9	35-45 GUSTING TO 55	DEPRESSION

ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH ADJOINING CENTRAL BAY OF BENGAL BETWEEN LAT 7.0°N TO 14.0°N LONG 82.0°E TO 88.0°E. 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 AND ADJOINING SOUTHEAST BOB.

**REMARKS:**

THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH SIMILAR INCREASED AMPLITUDE DURING NEXT 7 DAYS. MJO INDEX IS THUS CONDUCIVE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL (BOB) AND INTENSIFICATION OF THE

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PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%  
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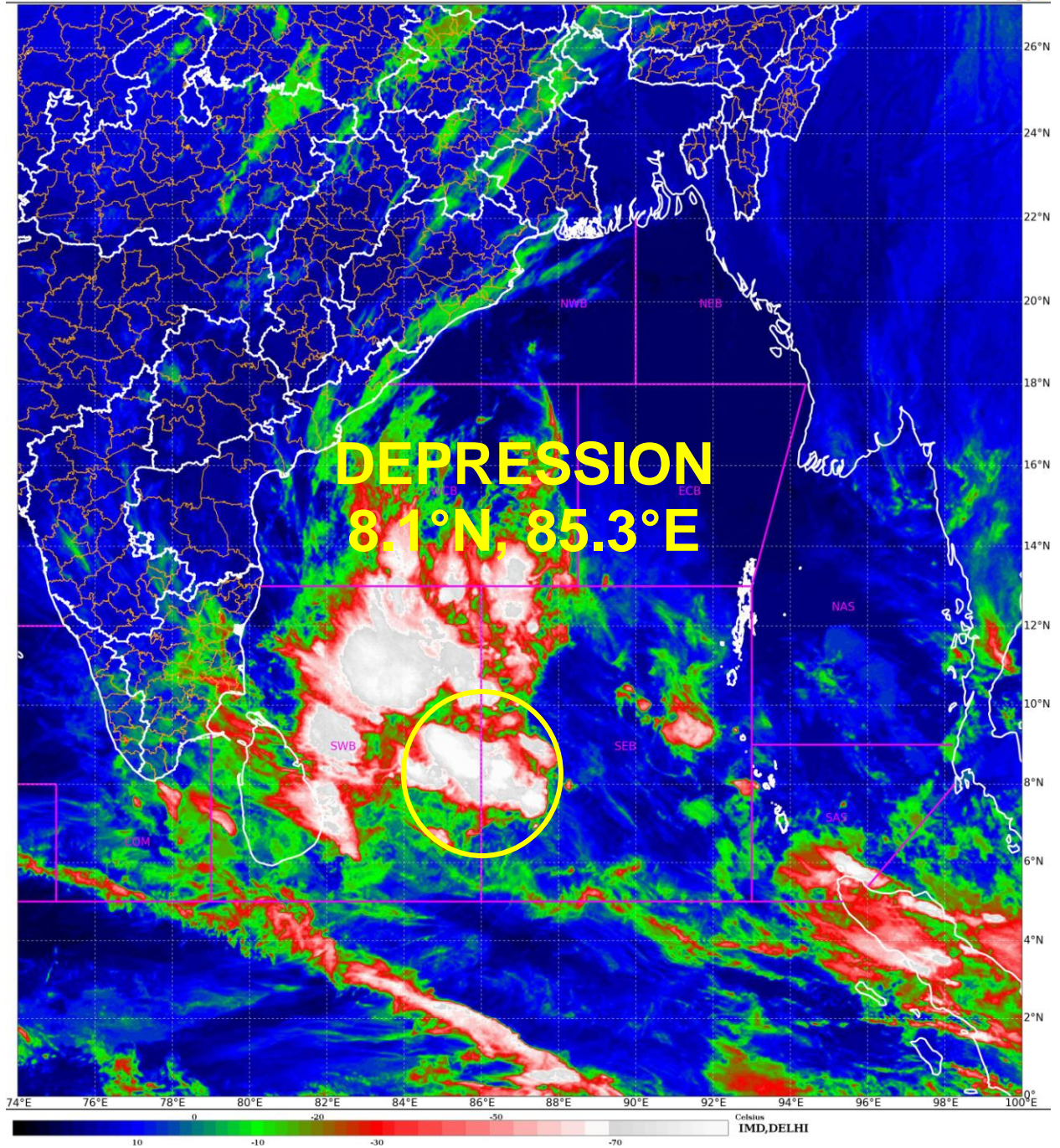
SYSTEM. THE CFS BASED FORECAST FOR EQUATORIAL WAVES INDICATE STRONG EASTERLY WINDS (5-7 MPS) OVER SOUTH BOB, STRONG WESTERLY WINDS (5-7 MPS) OVER EQUATORIAL INDIAN OCEAN (EIO) AND ADJOINING SOUTH BOB ALONGWITH KELVIN WAVES, MJO AND EQUATORIAL ROSSBY WAVES OVER EIO AND ADJOINING SOUTH BOB ON 30<sup>TH</sup> JANURAY. ALL THESE WAVES CONTRIBUTED TOWARDS ORGANIZATION OF CIRCULATION AND ENHANCEMENT OF CONVECTION OVER SOUTHEAST & ADJOINING SOUTHWEST BOB.

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  $100 \times 10^{-6} \text{ S}^{-1}$  LIES AROUND THE SYSTEM CENTER. LOW LEVEL CONVERGENCE IS AROUND  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER AND ANOTHER ZONE OF  $05 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO AROUND  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTER. WIND SHEAR IS MODERATE (15-20 KNOTS) AROUND SYSTEM CENTRE OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL. THE UPPER TROPOSPHERIC RIDGE IS SEEN ALONG 15.0°N OVER THE BOB. THE SYSTEM IS LIKELY TO BE STEERED WEST-NORTHWESTWARDS UNDER THE INFLUENCE OF EAST-SOUTHEASTERLY WINDS ALONG THE PERIPHERY OF RIDGE TILL 1200 UTC OF 31<sup>ST</sup> JANUARY. 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. THEREAFTER, THE STEERING LEVEL WOULD CHANGE AND THE SYSTEM WILL BE SHEARED SOUTHWESTWARDS.

MOST OF THE MODELS INCLUDING GFS, NCUM AND ECMWF ARE INDICATING INITIAL WEST-NORTHWESTWARDS MOVEMENT OF THE SYSTEM FOLLOWED BY SOUTH-SOUTHWESTWARDS RECURVATURE TOWARDS SRI LANKA COAST. IMD GFS IS INDICATING CROSSING OVER SOUTH SRI LANKA, NCUM IS INDICATING WEAKENING OVER SEA AND ECMWF IS INDICATING THE SYSTEM TO RECURVE SOUTH-SOUTHWESTWARDS TOWARDS THE SOUTH OF SRI LANKA COAST. IMD MME IS INDICATING CROSSING OVER SRI LANKA AROUND 0900 UTC OF 1<sup>ST</sup> FEBRUARY.

IN VIEW OF ALL THE ABOVE, THE SYSTEM IS LIKELY TO MAINTAIN THE INTENSITY OF DEPRESSION TILL CROSSING. FURTHER, IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS TILL 0900 UTC OF 31<sup>ST</sup>, RECURVE SOUTH-SOUTHWESTWARDS THEREAFTER AND CROSS SRI LANKA COAST AROUND 0600 UTC OF 01<sup>ST</sup> FEBRUARY.

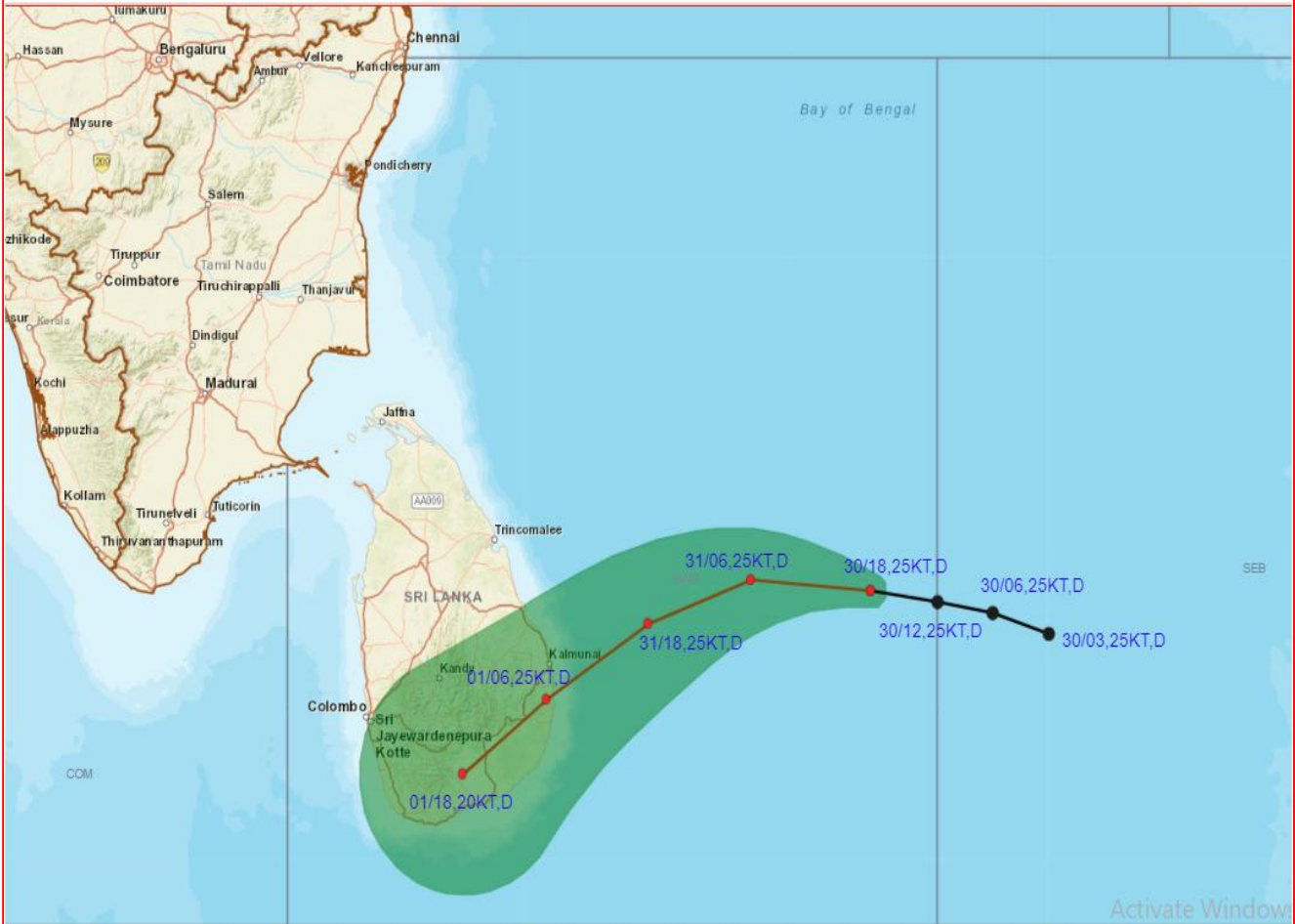
**(S.P. SINGH)**  
**SCIENTIST-C**  
**RSMC, NEW DELHI**



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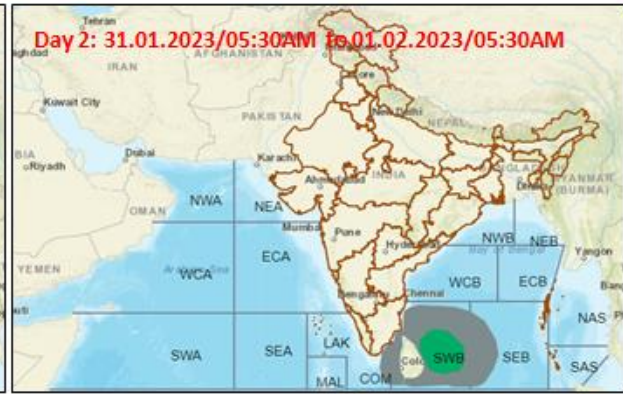
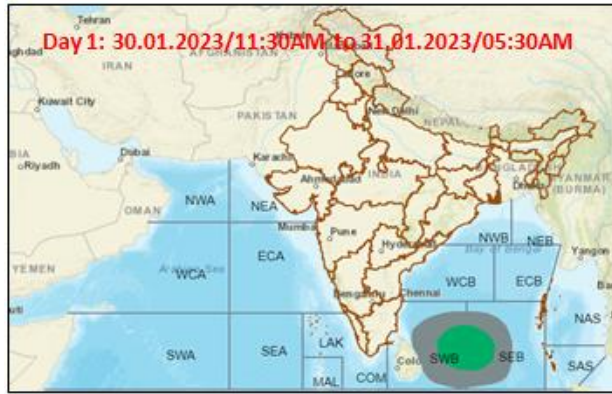
## OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 30<sup>th</sup> JANUARY, 2023.



**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 (≥ 120 KT)**

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

## Fishermen warning graphics



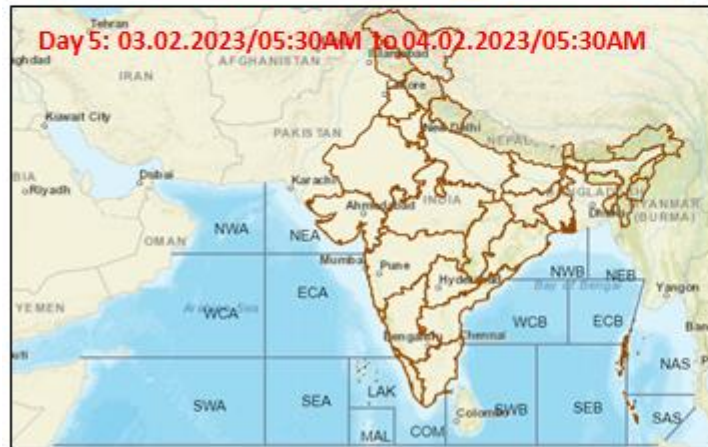
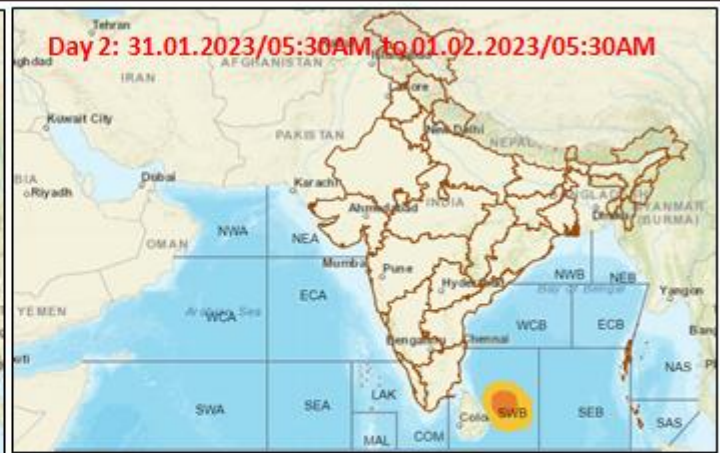
**Squally WX with wind speed 40-45 kmph gusting to 55 kmph**

**Squally wind speed 45-55 kmph gusting to 65 kmph**

**Fishermen are advised not to venture into the marked areas.**

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## Fishermen warning graphics



Probability of exceedence	
	Low (1-33%)
	Moderate (34-67%)

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