



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 23.10.2022**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 23.10.2022 BASED ON 0000 UTC OF 23.10.2022.**

**SUBJECT: DEPRESSION OVER EASTCENTRAL BAY OF BENGAL (CYCLONE ALERT: WEST BENGAL COAST)**

THE DEPRESSION OVER EASTCENTRAL BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF 17 KMPH DURING PAST 6 HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTERED AT 0000 UTC OF TODAY, THE 23<sup>RD</sup> OCTOBER OVER THE SAME REGION NEAR LATITUDE 15.4°N AND LONGITUDE 89.0°E, ABOUT 580 KM NORTHWEST OF PORT BLAIR (43333), 700 KM SOUTH OF SAGAR ISLAND (42903) AND 830 KM SOUTH OF BARISAL (41950).

IT IS VERY LIKELY TO MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND INTENSIFY INTO A **CYCLONIC STORM** OVER CENTRAL BAY OF BENGAL. THEREAFTER, IT WOULD CONTINUE TO RECURVE AND MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP (41964) AROUND 25<sup>TH</sup> OCTOBER EARLY MORNING (0000 UTC).

FORECAST TRACK & INTENSITY IS GIVEN BELOW:

DATE/TIME (UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
23.10.22/0000	15.4/89.0	50-60 GUSTING TO 70	DEEP DEPRESSION
23.10.22/0600	16.1/88.4	55-65 GUSTING TO 75	DEEP DEPRESSION
23.10.22/1200	16.9/88.0	60-70 GUSTING TO 80	CYCLONIC STORM
23.10.22/1800	17.7/88.1	65-75 GUSTING TO 85	CYCLONIC STORM
24.10.22/0000	18.6/88.5	80-90 GUSTING TO 100	CYCLONIC STORM
24.10.22/1200	20.4/89.5	85-95 GUSTING TO 105	SEVERE CYCLONIC STORM
25.10.22/0000	22.3/90.6	85-95 GUSTING TO 105	SEVERE CYCLONIC STORM
25.10.22/1200	24.0/91.7	45-55 GUSTING TO 65	DEPRESSION
26.10.22/0000	25.8/92.9	30-35 GUSTING TO 45	WELL MARKED LOW PRESSURE AREA

VORTEX OVER EASTCENTRAL BAY OF BENGAL HAS FURTHER INTENSIFIED AND NOW LAY CENTERED NEAR 15.4°N / 89.0°E. INTENSITY OF THE SYSTEM IS CHARACTERISED AS T 2.0. ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER BAY OF BENGAL BET LATITUDE 12.0°N TO 20.0°N LONGITUDE 85.5°E TO 93.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEGREE CELSIUS.

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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ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IS ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND SYSTEM AREA. ESTIMATED CENTRAL PRESSURE IS 1004 HPA. SEA CONDITION IS LIKELY TO BE ROUGH OVER SOUTHEAST BAY OF BENGAL & ADJOINING EASTCENTRAL AND NORTH ANDAMAN SEA.

**REMARKS:**

THE MADDEN JULIAN OSCILLATION INDEX (MJO) CURRENTLY LIES IN PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WOULD CONTINUE IN SAME PHASE DURING NEXT 5 DAYS WITH GRADUALLY INCREASING AMPLITUDE. HENCE MJO IS NOT SUPPORTIVE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER THE BAY OF BENGAL OF BENGAL.

SEA SURFACE TEMPERATURE (SST) IS AROUND 29-30<sup>0</sup>C OVER CENTRAL & NORTH BOB. THE OCEAN HEAT CONTENT (OHC) IS AROUND 120 KJ/CM<sup>2</sup> OVER THE SAME REGION.

LOW LEVEL VORTICITY IS ABOUT  $120 \times 10^{-6} \text{ S}^{-1}$  AROUND SYSTEM CENTRE. VERTICALLY IT IS EXTENDING UPTO 500 HPA LEVEL. LOW LEVEL CONVERGENCE HAS INCREASED TO  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF SYSTEM CENTRE. STRONG EQUATORWARD OUTFLOW IS ALSO SEEN IN UPPER LEVELS. WIND SHEAR IS MODERATE (10-15 KNOTS) OVER AROUND THE SYSTEM CENTER AND IS HIGH EAST OF THE SYSTEM AS WELL AS TO THE NORTH OF 15°N. CURRENTLY, THE SYSTEM IS IN A FAVOURABLE ENVIRONMENT FOR FURTHER INTENSIFICATION. UPPER TROPOSPHERIC RIDGE ROUGHLY RUNS ALONG 18°N OVER BAY OF BENGAL. A TROUGH IN MID-LATITUDE WESTERLIES ROUGHLY RUNNING ALONG 82°E UPTO 20°N. THE SYSTEM IS CURRENTLY TRACKING NORTHWARDS ALONG THE PERIPHERY OF RIDGE AND FROM 24<sup>TH</sup> ONWARDS WOULD BE SHEARED NORTHEASTWARDS UNDER THE INFLUENCE OF TROUGH IN WESTERLIES.

MOST OF THE MODELS ARE INDICATING LIKELY FORMATION OF CYCLONIC STORM DURING NEXT 12 HOURS. THE MODELS ARE ALSO INDICATING GRADUAL NORTHEASTWARDS RECURVATURE OF THE SYSTEM FROM 23<sup>RD</sup> EVENING. THEREAFTER, IT WOULD CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS BANGLADESH COAST BETWEEN TINKONA ISLAND AND SANDWIP AROUND 25<sup>TH</sup> OCTOBER EARLY MORNING (0000 UTC).

(DR. SHRAVAN MUPPA)  
RSMC NEW DELHI



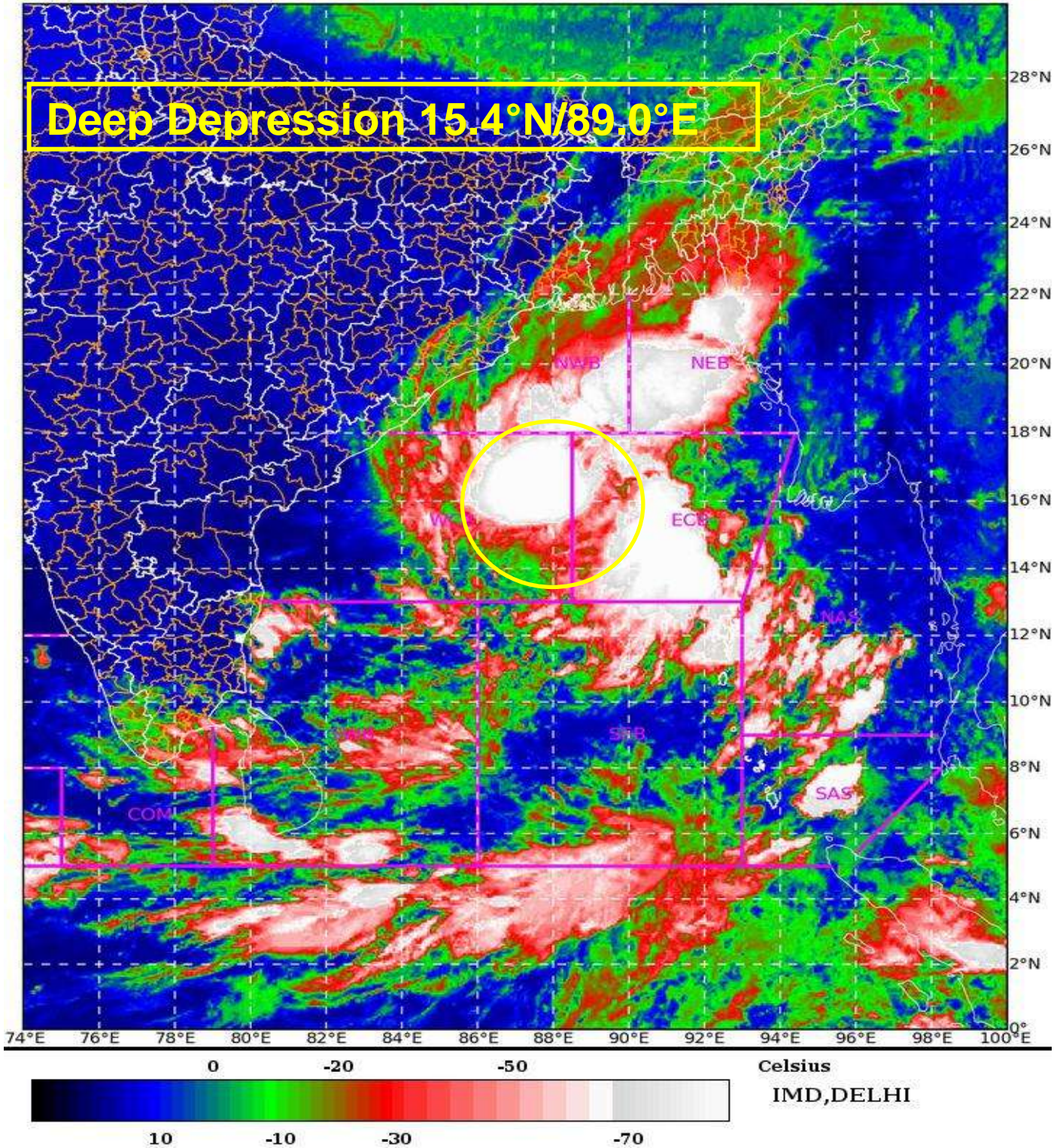
SAT : INSAT-3D IMG

23-10-2022/(0200 to 0226) GMT

IMG\_TIR1\_TEMP 10.8 um

23-10-2022/(0730 to 0756) IST

L1C Mercator



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## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER EASTCENTRAL BAY OF BENGAL BASED ON 0000 UTC OF 23<sup>rd</sup> OCTOBER, 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
- AREA OF MAXIMUM SUSTAINED WIND SPEED:
- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- ≥ 64 KT (≥118 KMPH)

### IMPACT OVER THE SEA

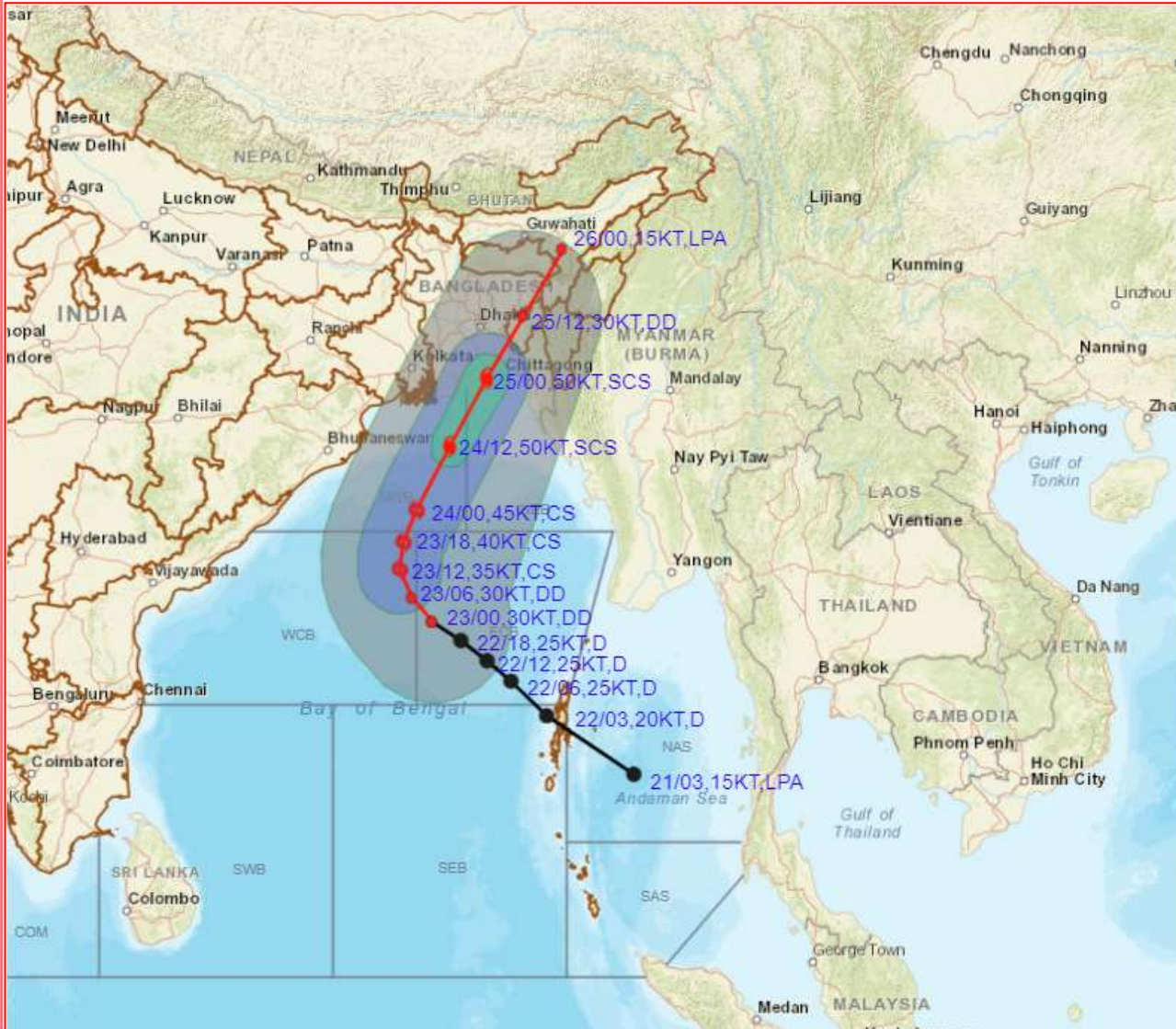
MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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