



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

**DEMS-RSMC SPECIAL TROPICAL CYCLONES NEW DELHI DATED 21.03.2022**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 21.03.2022 BASED ON 1200 UTC OF 21.03.2022.**

**SUB: DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST & EASTCENTRAL BAY OF BENGAL**

THE DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL, MOVED NEARLY NORTHWARDS WITH A SPEED OF 13 KMPH DURING LAST 06 HOURS, AND LAY CENTERED AT 1200 UTC OF TODAY, 21<sup>ST</sup> MARCH, OVER NORTH ANDAMAN SEA AND ADJOINING SOUTHEAST & EASTCENTRAL BAY OF BENGAL, NEAR LATITUDE 13.3°N AND LONGITUDE 94.0°E, ABOUT 120 KM EAST-NORTHEAST OF MAYABUNDAR (43309), 230 KM NORTH-NORTHEAST OF PORT BLAIR (43333), 450 KM SOUTH-SOUTHWEST OF YANGON (48097) AND 570 KM SOUTH-SOUTHWEST OF THANDWE (48080).

IT IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT WOULD CONTINUE TO MOVE NEARLY NORTHWARDS AWAY FROM ANDAMAN ISLANDS AND CROSS MYANMAR COAST BETWEEN LATITUDE 18°N & 19°N AROUND THANDWE (48080) AROUND 0000 UTC OF 23<sup>RD</sup> MARCH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
21.03.22/1200	13.3/94.0	55-65 GUSTING TO 75	DEEP DEPRESSION
21.03.22/1800	14.2/94.0	55-65 GUSTING TO 75	DEEP DEPRESSION
22.03.22/0000	15.1/93.9	65-75 GUSTING TO 85	CYCLONIC STORM
22.03.22/0600	15.9/93.9	65-75 GUSTING TO 85	CYCLONIC STORM
22.03.22/1200	16.7/93.9	55-65 GUSTING TO 75	DEEP DEPRESSION
23.03.22/0000	18.5/94.3	45-55 GUSTING TO 65	DEPRESSION

AS PER INSAT 3D IMAGERY, 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 ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL BETWEEN LATITUDE 13.0°N & 16.0°N AND LONGITUDE 92.0°E & 94.5°E AND ANDAMAN & NICOBAR ISLANDS. MINIMUM CLOUD TOP TEMPERATURE IS AROUND MINUS 93 °C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH OVER ANDAMAN SEA AND ADJOINING SOUTHEAST BAY OF BENGAL. THE ESTIMATED CENTRAL PRESSURE IS 1000 HPA.

**REMARKS:**

SEA SURFACE TEMPERATURE IS AROUND 29-30°C OVER ANDAMAN SEA, SOUTHEAST AND ADJOINING EASTCENTRAL BAY OF BENGAL (BOB). TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM<sup>2</sup> OVER THE SAME REGION BECOMING LESS THAN 50 KJ/CM<sup>2</sup> OVER NORTH BOB. THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 2 DAYS AND MOVE TO PHASE 4 WITH AMPLITUDE REMAINING MORE THAN 1. THE PHASE AND AMPLITUDE OF MJO IS CONDUCIVE FOR ENHANCED CONVECTION AND HENCE CYCLOGENESIS OVER THE BOB DURING NEXT 2 DAYS.

LOW LEVEL VORTICITY IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  NEAR SYSTEM CENTRE WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. LOW LEVEL CONVERGENCE IS  $50 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH-NORTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE WITH DECREASING TREND (BECOMING 10-15 KNOTS) ALONG THE EXPECTED TRACK OF THE SYSTEM. CURRENT CONDITIONS INDICATE THAT THE SYSTEM IS LYING IN FAVOURABLE ENVIRONMENT. POLEWARD OUTFLOW IS SEEN IN UPPER LEVELS. THE SYSTEM IS TRACKING NORTHWARDS ALONG THE PERIPHERY OF ANTICYCLONE LYING TO IT'S NORTHEAST OVER MYANMAR & ADJOINING THAILAND. UPPER TROPOSPHERIC RIDGE IS SEEN NEAR 17°N.

NUMERICAL MODELS INDICATE MARGINAL INTENSIFICATION OF THE SYSTEM DURING NEXT 24 HOURS. HOWEVER, MOST OF THE MODELS ARE UNANIMOUS REGARDING NORTHWARDS MOVEMENT OF THE SYSTEM TOWARDS MYANMAR COAST. HOWEVER, THERE IS DIVERGENCE WRT LANDFALL POINT.

IN VIEW OF ABOVE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HRS. IT IS LIKELY TO MOVE NEARLY NORTHWARDS ALONG & OFF ANDAMAN ISLANDS TOWARDS MYANMAR COAST DURING NEXT 36 HRS AND CROSS MYANMAR COAST AROUND 0000 UTC OF 23RD MARCH.

( A. K. DAS)  
SCIENTIST-E  
RSMC NEW DELHI

SAT : INSAT-3D IMG

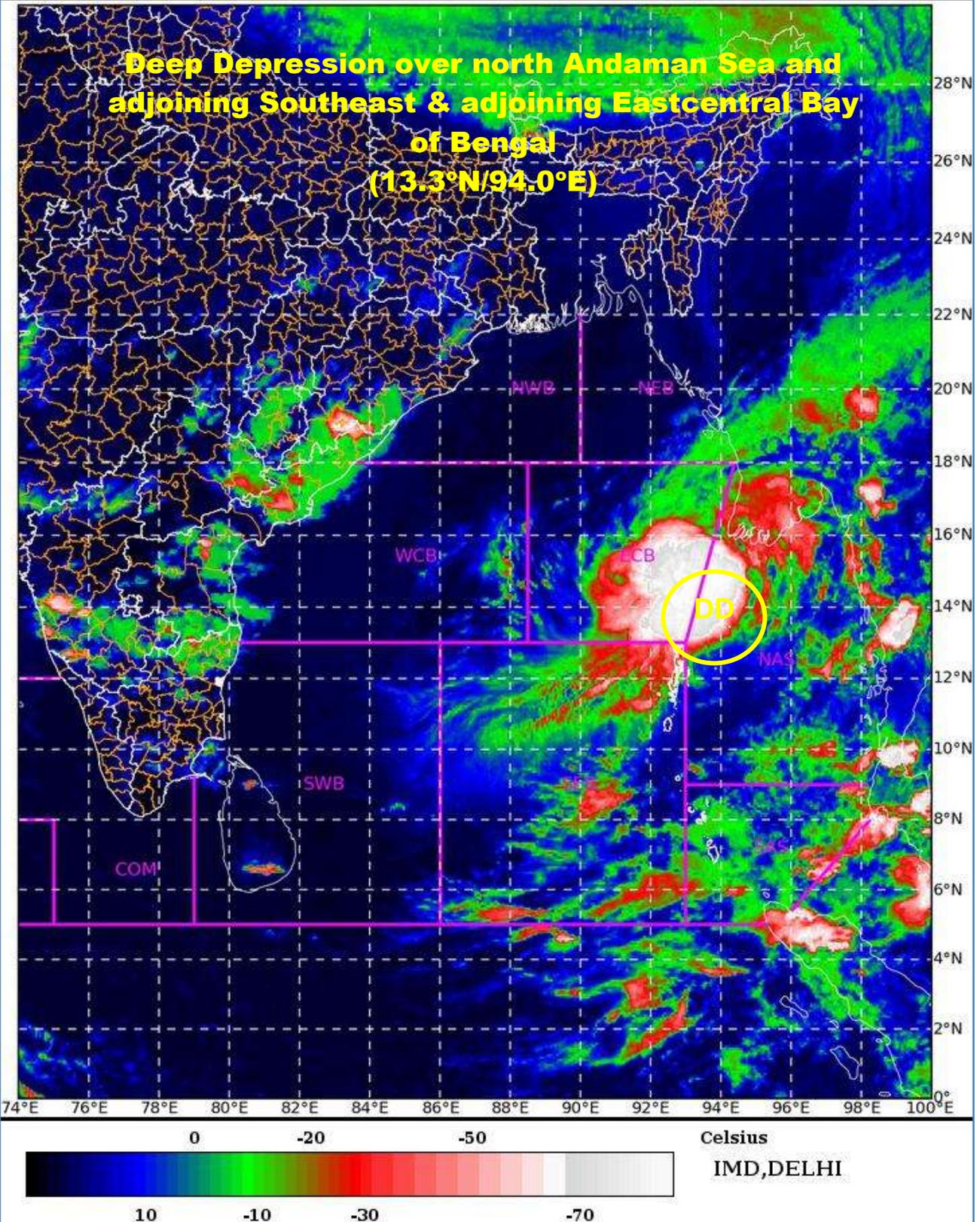
21-03-2022/(1330 to 1356) GMT

IMG\_TIR1\_TEMP 10.8 um

21-03-2022/(1900 to 1926) IST



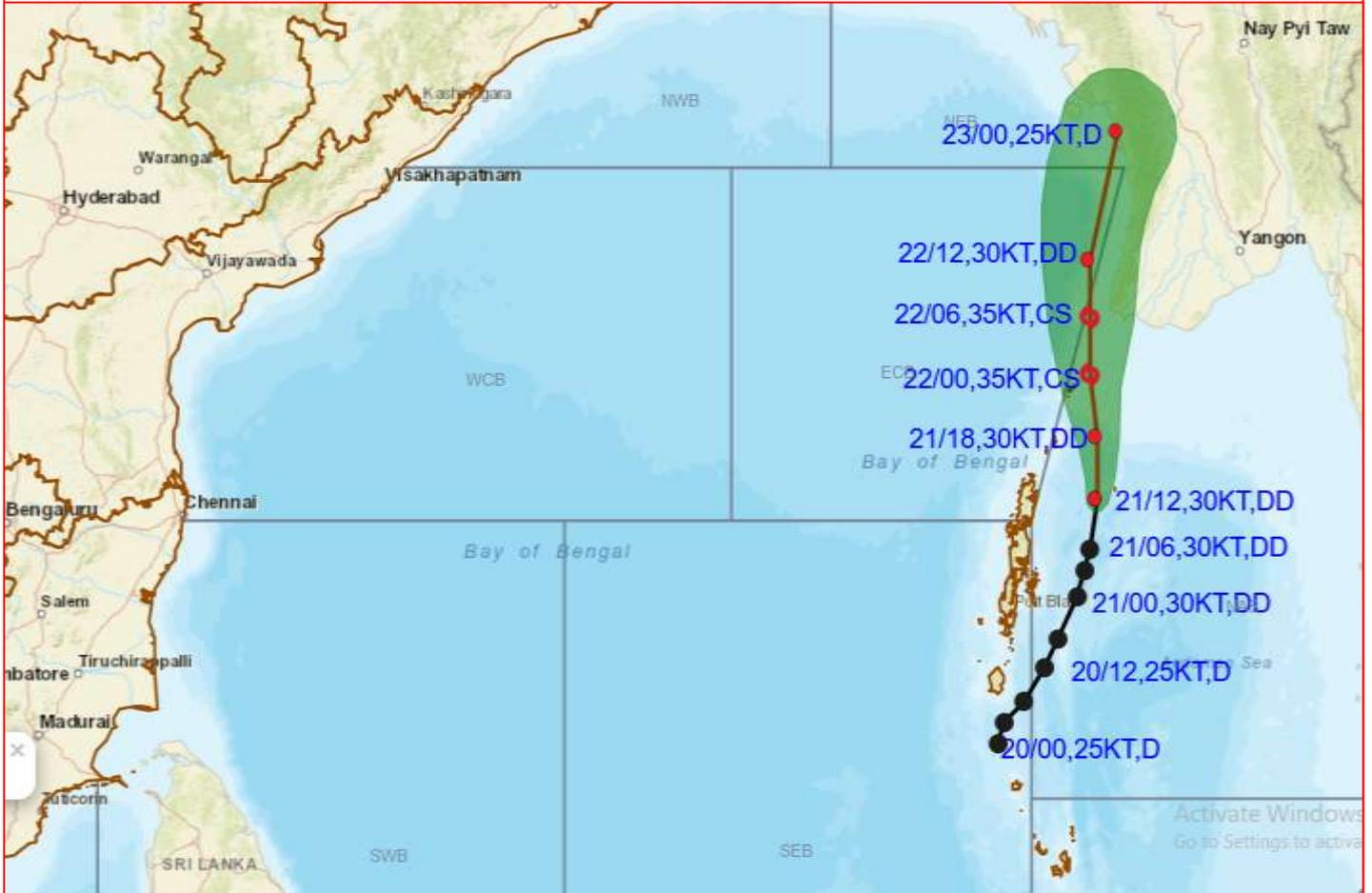
L1C Mercator



**DD: Deep Depression**



**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING AREAS OF SOUTHEAST & EASTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 21st MARCH 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)

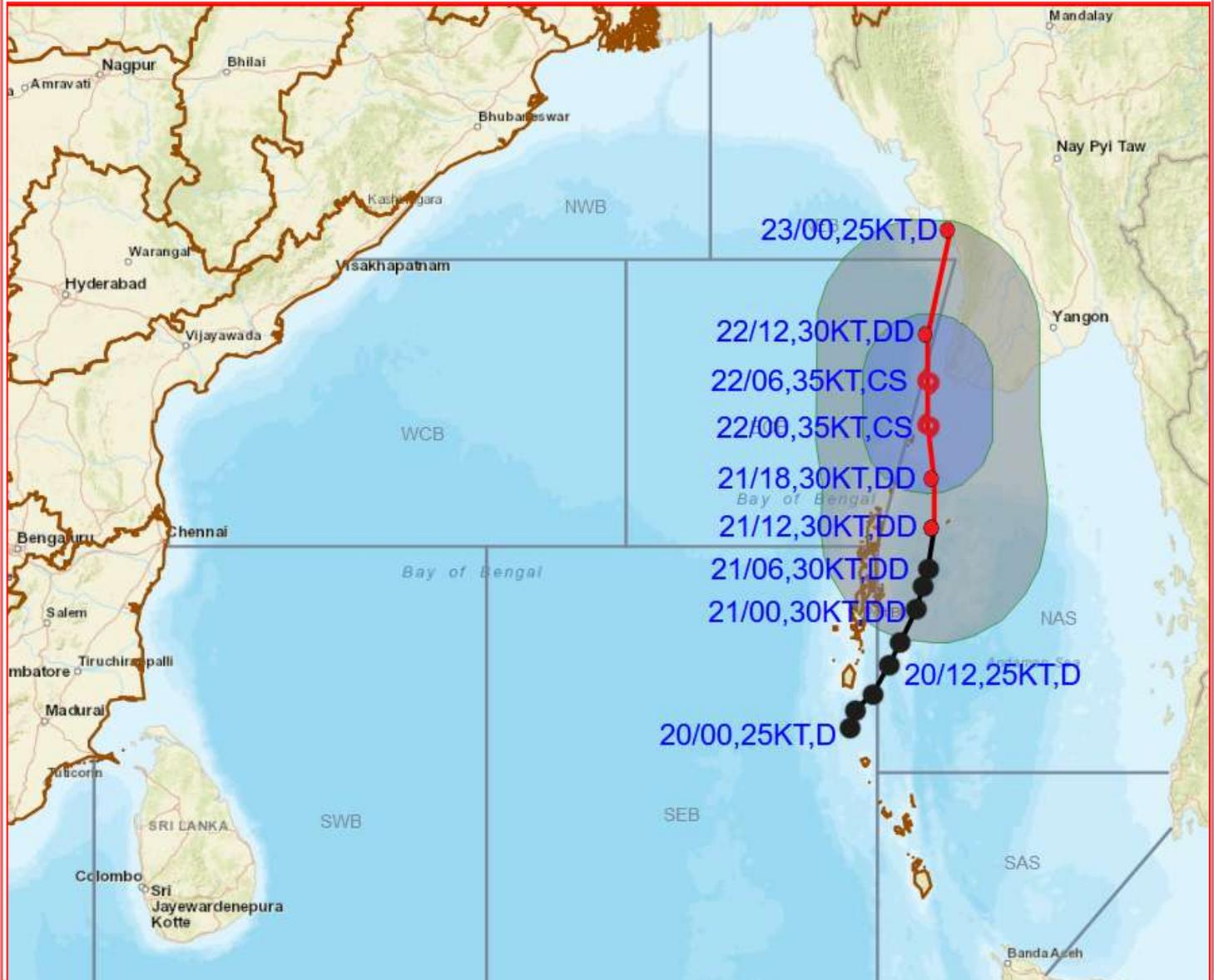
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

STATIONS	DISTANCE(KM) AND DIRECTION FROM STATIONS		
	21.03.22/1200	22.03.22/0000	22.03.22/1200
Yangon	450,SSW	310,SW	240,W
Carnicobar	480,NNE	670,N	850,N
Hut bay	340,NNE	520,NNE	700,NNE
Portblair	230,NE	400,NNE	570,NNE
Mayabundar	120,ENE	270,NNE	430,NNE

N:NORTH, NNE:NORTH-NORTHEAST, NE:NORTHEAST, ENE:EAST-NORTHEAST, E:EAST, SE:SOUTHEAST, SSE:SOUTH-SOUTHEAST, S:SOUTH, SSW:SOUTH-SOUTHWEST, SW:SOUTHWEST, WSW:WEST-SOUTHWEST, W:WEST, WNW:WEST-NORTHWEST, NW:NORTHWEST, NNW:NORTH-NORTHWEST



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER NORTH ANDAMAN SEA AND ADJOINING AREAS OF SOUTHEAST & EASTCENTRAL BAY OF BENGAL BASED ON 1200 UTC OF 21st MARCH 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 ( $\geq$  120 KT)

- LESS THAN 34 KT
- 34-47 KT
- $\geq$  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)
- $\geq$  64 KT ( $\geq$  118 KMPH)

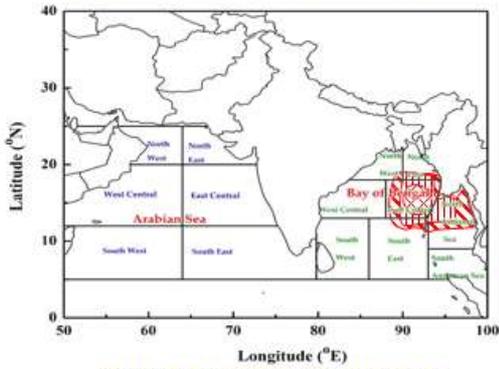
**IMPACT OVER THE SEA**

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
$\geq$ 64 ( $\geq$ 118)	Phenomenal	Total suspension of fishing operations

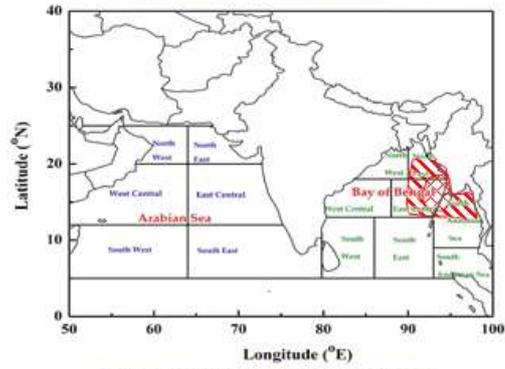
# Fishermen warning Graphics

## INDIA METEOROLOGICAL DEPARTMENT FISHERMAN WARNING FOR BAY OF BENGAL AND ARABIAN SEA

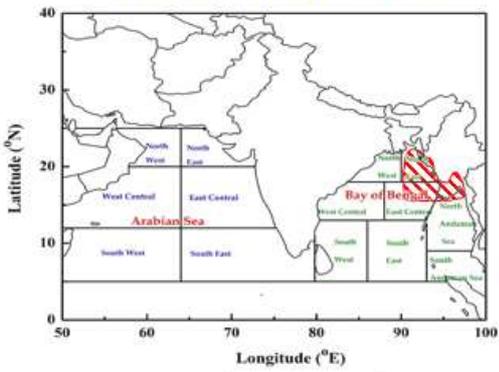
DAY-1: 21.03.2022/0600 UTC TO 22.03.2022/0600 UTC



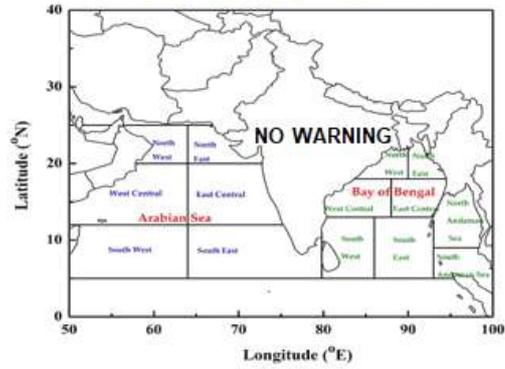
DAY-2: 22.03.2022/0600 UTC TO 23.03.2022/0600 UTC



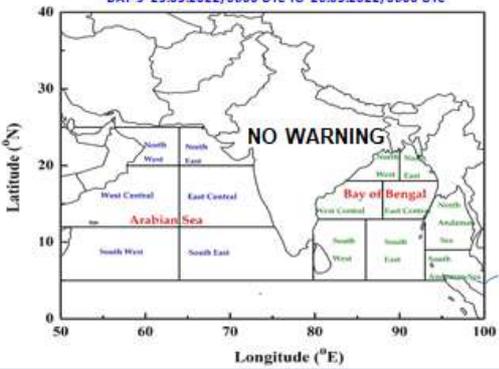
DAY-3: 23.03.2022/0600 UTC TO 24.03.2022/0600 UTC



DAY-4: 24.03.2022/0600 UTC TO 25.03.2022/0600 UTC



DAY-5: 25.03.2022/0600 UTC TO 26.03.2022/0600 UTC



### AREA UNDER FISHERMEN WARNING

-  40-50 KMPH GUSTING TO 55 KMPH (SQUALLY WEATHER)
-  45-55 KMPH GUSTING TO 65 KMPH
-  55-65 KMPH GUSTING TO 70 KMPH
-  65-75 KMPH GUSTING TO 85 KMPH