



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**  
**TROPICAL CYCLONE ADVISORY NO. 3**

**FROM: RSMC TROPICAL CYCLONES NEW DELHI DATED 08.12.2022**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**

**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**  
**NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)**  
**PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)**  
**IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)**  
**QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY NO. 3 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 08.12.2022 BASED ON 0000 UTC OF 08.12.2022**

**SUBJECT: THE CYCLONIC STORM “MANDOUS” PRONOUNCED AS “MAN-DOUS” OVER SOUTHWEST BAY OF BENGAL (CYCLONE ALERT: NORTH TAMILNADU, PUDUCHERRY AND SOUTH ANDHRA PRADESH COASTS)**

THE CYCLONIC STORM “MANDOUS” PRONOUNCED AS “MAN-DOUS” OVER SOUTHWEST BAY OF BENGAL MOVED NEARLY WEST-NORTHWESTWARDS WITH A SPEED OF 06 KMPH DURING PAST 06 HOURS, AND LAY CENTRED AT 0000UTC OF TODAY, THE 08<sup>TH</sup> DECEMBER, 2022 OVER SOUTHWEST BAY OF BENGAL, NEAR LATITUDE 9.4°N AND LONGITUDE 84.1°E, ABOUT 330 KM EAST-NORTHEAST OF TRINCOMALEE (43418), ABOUT 450 KM EAST-SOUTHEAST OF JAFFNA (43404), ABOUT 500 KM EAST-SOUTHEAST OF KARAIKAL (43346) AND ABOUT 580 KM EAST-SOUTHEAST OF CHENNAI (43279).

IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS CROSS NORTH TAMIL NADU-PUDUCHERRY & ADJOINING SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND SRIHARIKOTA WITH A MAXIMUM SUSTAINED WIND SPEED OF 65-75 KMPH GUSTING TO 85 KMPH AROUND NIGHT HOURS OF 09<sup>TH</sup> DECEMBER.

**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
08.12.22/0000	9.4/84.1	70-80 gusting to 90	CYCLONIC STORM
08.12.22/0600	9.9/83.5	80-90 gusting to 100	CYCLONIC STORM
08.12.22/1200	10.3/82.9	80-90 gusting to 100	CYCLONIC STORM
08.12.22/1800	10.8/82.3	80-90 gusting to 100	CYCLONIC STORM
09.12.22/0000	11.3/81.7	75-85 gusting to 95	CYCLONIC STORM
09.12.22/1200	12.1/80.6	70-80 gusting to 90	CYCLONIC STORM
10.12.22/0000	12.6/79.9	55-65 gusting to 75	DEEP DEPRESSION
10.12.22/1200	12.8/79.5	30-40 gusting to 50	DEPRESSION

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%  
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

AS PER INSAT 3D IMAGERY, CONVECTION SHOWS CURVED BAND PATTERN WITH INTENSITY T2.5. THE ASSOCIATED BROKEN LOW MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER SOUTHWEST BAY OF BENGAL BETWEEN AREA LATITUDE 6.0°N TO 12.5°N LONGITUDE 81.0°E TO 85.5°E SRILANKA. THE CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 40 KNOTS GUSTING TO 50 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA. SEA CONDITION IS VERY ROUGH TO HIGH OVER SOUTHWEST BAY OF BENGAL AND NEIGHBOURHOOD.

**REMARKS:**

THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 AND WILL REMAIN THERE TILL 9<sup>TH</sup> DECEMBER. SEA SURFACE TEMPERATURE (SST) IS AROUND 28°C OVER SOUTHWEST AND CENTRAL BOB. IT DECREASES TO 27°C OVER ALONG AND OFF NORTH TAMILNADU AND ADJOINING ANDHRA PRADESH COASTS. ALSO THE OCEAN HEAT CONTENT (OHC) IS 80-100 KJ/CM<sup>2</sup> OVER SOUTHWEST BOB AND LESS THAN 50 KJ/CM<sup>2</sup> OVER WESTCENTRAL AND SOUTHWEST BOB ALONG EAST COAST OF INDIA. THERE IS WARM AIR ADVECTION TO THE SYSTEM FROM THE SOUTHERN SECTOR. IT WOULD CONTINUE SO TILL 9<sup>TH</sup> DECEMBER MORNING.

LOW LEVEL VORTICITY IS  $250 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTER. LOW LEVEL CONVERGENCE IS  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF SYSTEM CENTER AND UPPER LEVEL DIVERGENCE IS  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST OF THE SYSTEM CENTER.

WIND SHEAR IS MODERATE TO HIGH (30-35 KNOTS) OVER & AROUND THE SYSTEM CENTER AND HIGH (35-40 KNOTS) ALONG THE EXPECTED TRACK. THE UPPER TROPOSPHERIC RIDGE RUNS ROUGHLY ALONG 15.0°N OVER THE BOB. THE SYSTEM IS UNDER THE INFLUENCE OF EAST SOUTHEASTERLY STEERING WINDS AT MIDDLE TROPOSPHERIC LEVELS AND HENCE THE PRESENT SYSTEM IS LIKELY TO BE STEERED TOWARDS WEST-NORTHWEST TILL 8<sup>TH</sup> DECEMBER. THERAFTER, AS THE SYSTEM WILL COME CLOSER TOWARDS THE RIDGE, THE NORTHERLY COMPONENT IS LIKELY TO INCREASE. THE INTENSIFICATION PARAMETERS AS MENTIONED ABOVE WILL CONTINUE TO BE FAVOURABLE FOR INTENSIFICATION OF THE SYSTEM TILL 8<sup>TH</sup> DECEMBER EVENING. THEREAFTER, DUE TO SLOW MOVEMENT OF THE SYSTEM, COLD AND DRY AIR INTRUSION FROM SOUTH PENINSULAR INDIA, THE SYSTEM WOULD SHOW SLIGHT WEAKENING TREND WHILE MOVING TOWARDS COAST. WHILE THERE IS BROAD CONSENSUS ABOUT THE LANDFALL POINT, THE NWP MODELS ARE SLOWLY CONVERGING WITH RESPECT TO THE LANDFALL TIMING INDICATING AROUND 1800 UTC OF 09<sup>TH</sup> DECEMBER.

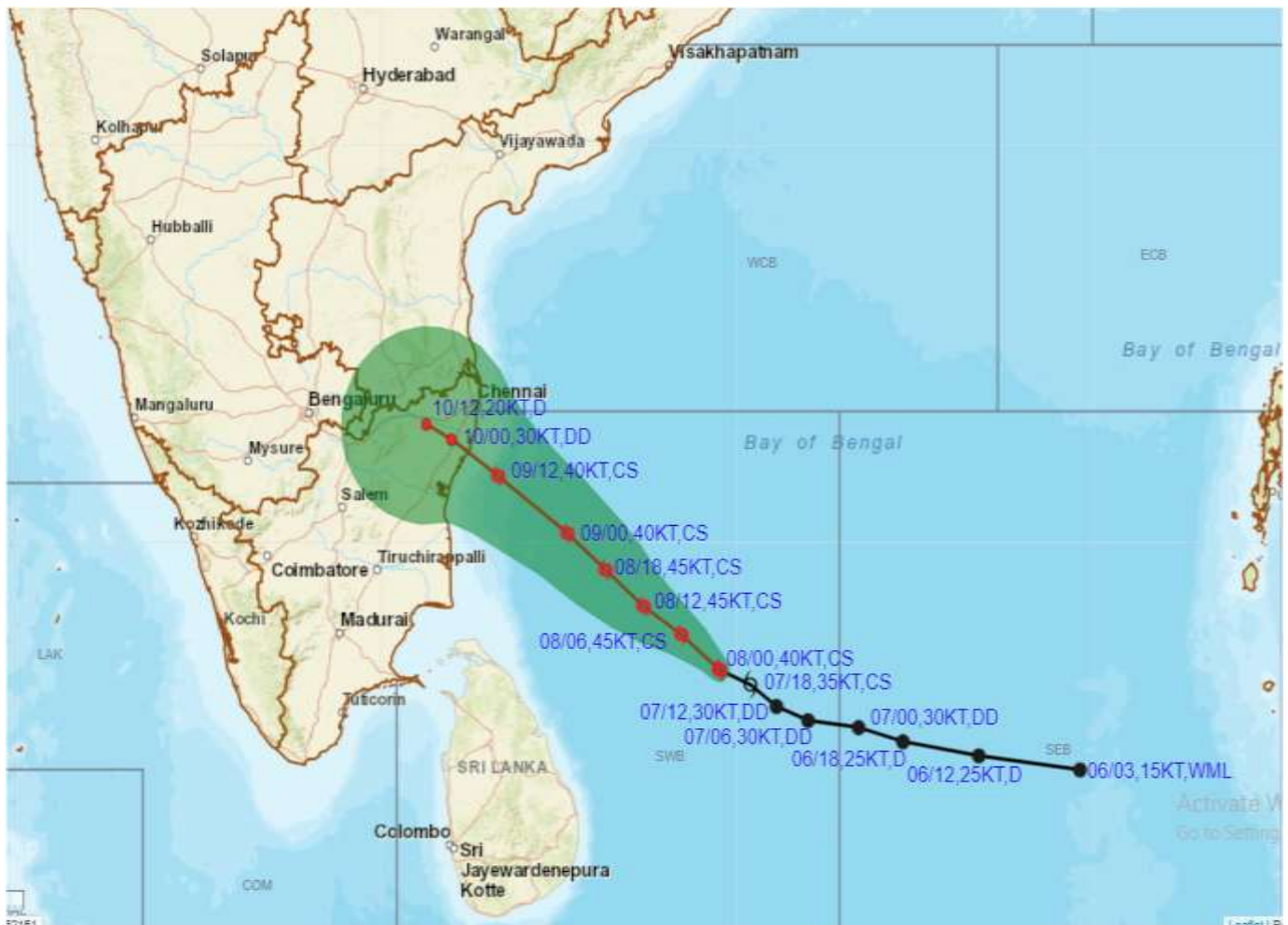
IN VIEW OF ALL THE ABOVE, IT IS INFERRED THAT THE CYCLONIC STORM "MANDOUS" PRONOUNCED AS "MAN-DOUS" OVER SOUTHWEST BAY OF BENGAL IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS CROSS NORTH TAMIL NADU-PUDUCHERRY & ADJOINING SOUTH ANDHRA PRADESH COASTS BETWEEN PUDUCHERRY AND SRIHARIKOTA WITH A MAXIMUM SUSTAINED WIND SPEED OF 65-75 KMPH GUSTING TO 85 KMPH AROUND NIGHT HOURS OF 09<sup>TH</sup> DECEMBER

**R.K JENAMANI**

**SCIENTIST-F,RSMC,NEW DELHI**



**OBSERVED AND FORECAST TRACK OF CYCLONIC STORM “MANDOUS” OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC OF 08<sup>th</sup> DECEMBER, 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

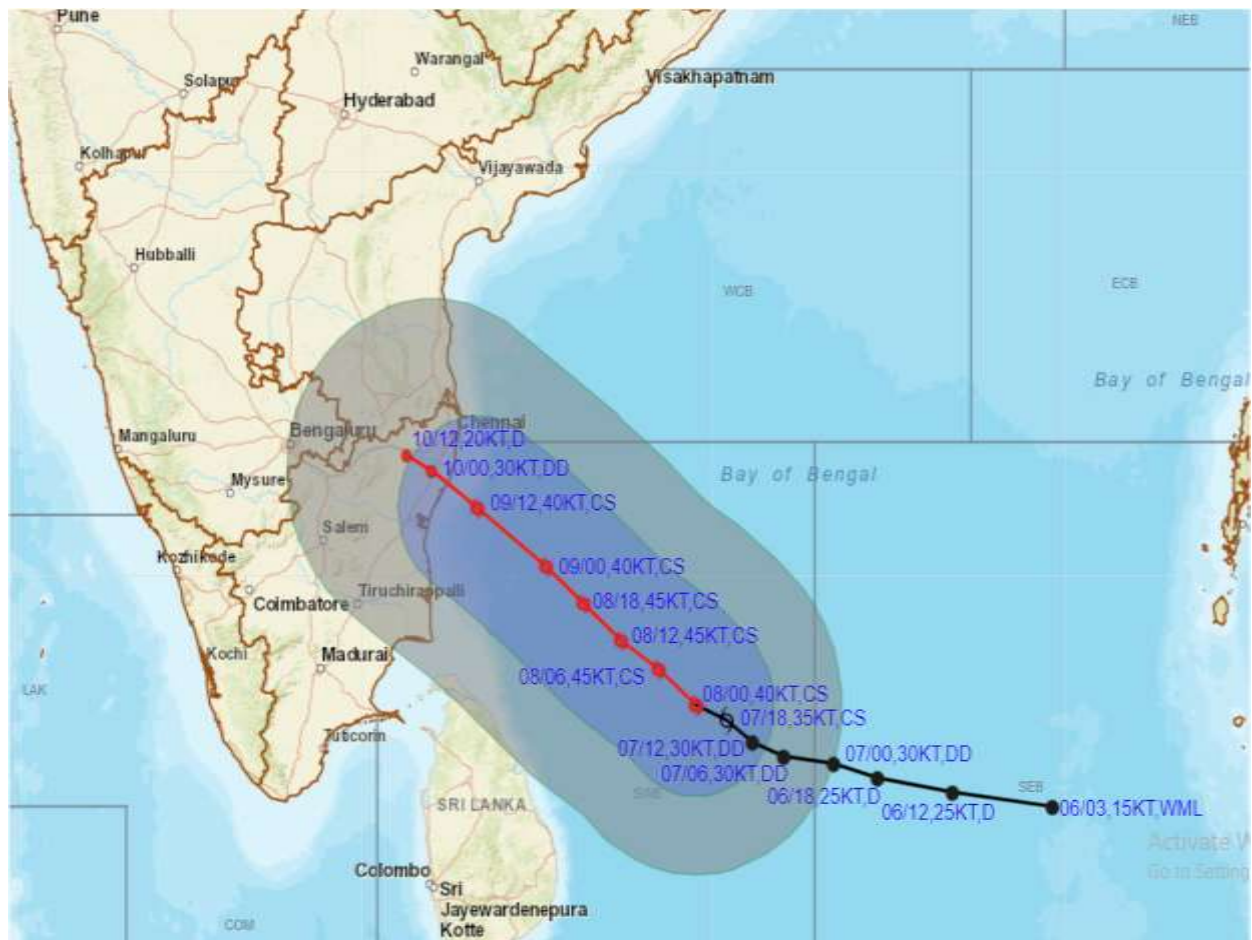
— FORECAST TRACK

▲ CONE OF UNCERTAINTY

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%  
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "MANDOUS" OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC OF 08<sup>th</sup> DECEMBER 2022**

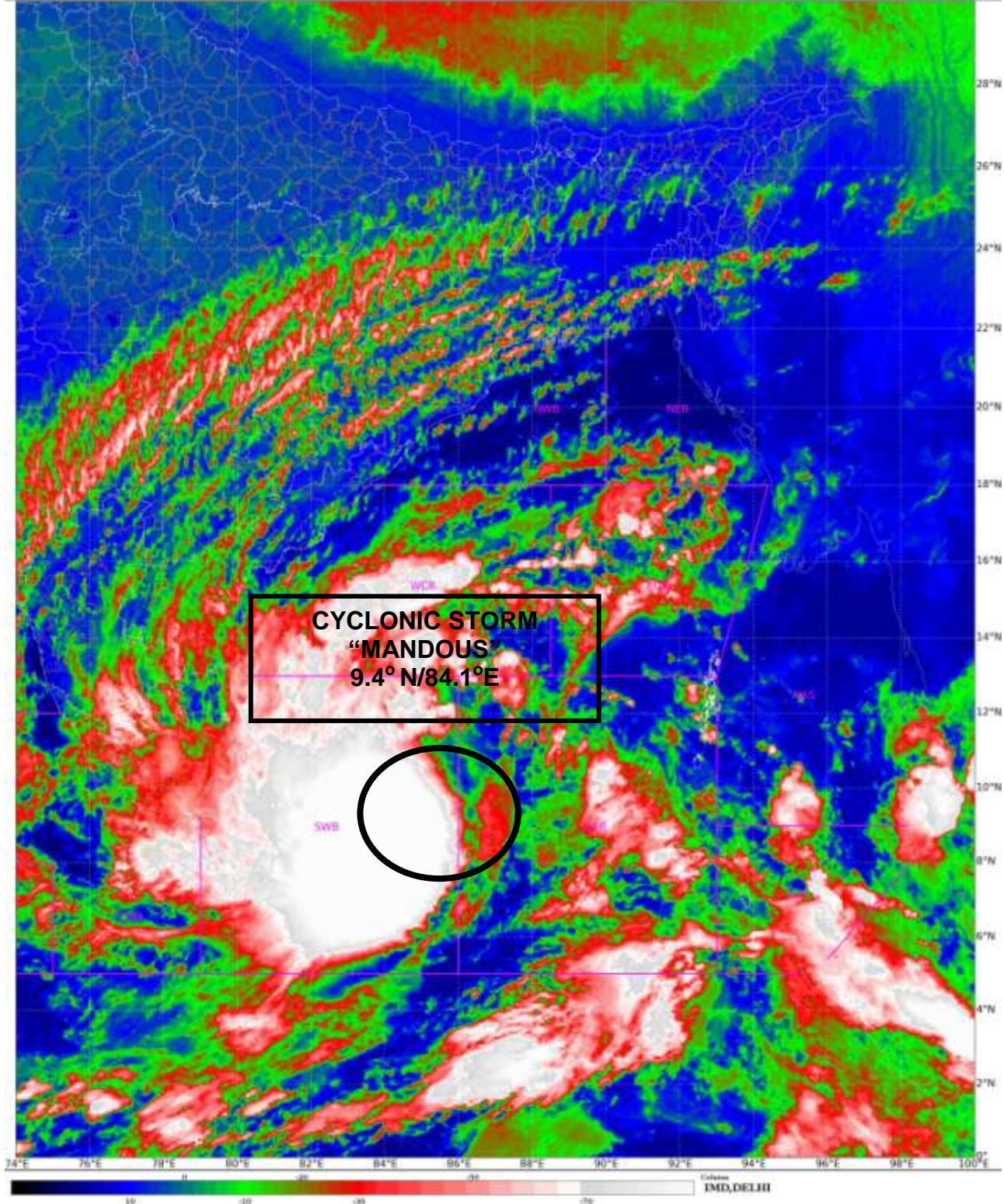


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE 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)

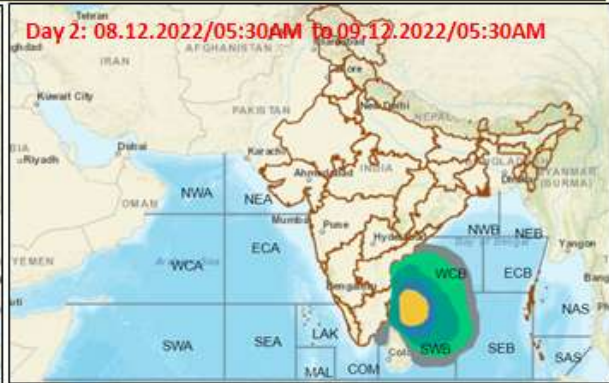
**IMPACT OVER THE SEA**

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



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%  
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

## Fishermen warning graphics



	Squally WX with wind speed 40-45 kmph gusting to 55 kmph
	Squally WX with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed 45-55 kmph gusting to 65 kmph
	Squally wind with wind speed 55-65 kmph gusting to 75 kmph
	Gale wind with wind speed 70-80 kmph gusting to 90 kmph
	Gale wind with wind speed 89-90 kmph gusting to 100 kmph

Fishermen are advised not to venture into the marked areas.

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%  
 This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins