



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL CYCLONE ADVISORY NO. 2

FROM: RSMC TROPICAL CYCLONES NEW DELHI DATED 07.12.2022

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. 2 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2330 UTC OF 07.12.2022 BASED ON 2100 UTC OF 07.12.2022

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 A CYCLONIC STORM “MANDOUS” PRONOUNCED AS “MAN-DOUS” OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL MOVED NEARLY WEST-NORTHWESTWARDS WITH A SPEED OF 08 KMPH DURING PAST 03 HOURS, AND LAY CENTRED AT 2100UTC OF TODAY, THE 07TH DECEMBER, 2022 OVER SOUTHWEST BAY OF BENGAL, NEAR LATITUDE 9.3°N AND LONGITUDE 84.4°E, ABOUT 360 KM EAST-NORTHEAST OF TRINCOMALEE (43418), ABOUT 480 KM EAST-SOUTHEAST OF JAFFNA (43404), ABOUT 530 KM EAST-SOUTHEAST OF KARAIKAL(43346) AND ABOUT 620 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 09TH 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 |
|-----------------------|-------------------------------------|--|---|
| 07.12.22/2100 | 9.3/84.4 | 60-70 GUSTING to 80 | CYCLONIC STORM |
| 08.12.22/0000 | 9.6/84.0 | 70-80 GUSTING to 90 | CYCLONIC STORM |
| 08.12.22/0600 | 10.1/83.4 | 80-90 GUSTING to 100 | CYCLONIC STORM |
| 08.12.22/1200 | 10.5/82.8 | 80-90 GUSTING to 100 | CYCLONIC STORM |
| 08.12.22/1800 | 10.9/82.3 | 80-90 GUSTING to 100 | CYCLONIC STORM |
| 09.12.22/0600 | 11.7/81.2 | 70-80 GUSTING to 90 | CYCLONIC STORM |

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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| | | | |
|---------------|-----------|---------------------|-----------------|
| 09.12.22/1800 | 12.5/80.8 | 55-65 GUSTING to 75 | DEEP DEPRESSION |
| 10.12.22/0600 | 12.8/79.3 | 40-50 GUSTING to 60 | DEPRESSION |

AS PER INSAT 3D IMAGERY, CONVECTION SHOWS CURVED BAND PATTERN. THE ASSOCIATED BROKEN LOW MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER SOUTHWEST BAY OF BENGAL AND SCATTERED LOW MEDIUM CLOUDS WITH EMBEDDED MODERATE TO VERY INTENSE CONVECTION LIES OVER REST BAY OF BENGAL, SRILANKA AND COASTAL TAMIL NADU.

THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 40 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 999 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 9TH DECEMBER. MJO INDEX IS THUS CONDUCIVE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL AND INTENSIFICATION OF THE SYSTEM. SEA SURFACE TEMPERATURE (SST) IS AROUND 28⁰C OVER SOUTHWEST AND CENTRAL BOB. IT DECREASES TO 27⁰C OVER ALONG AND OFF NORTH TAMILNADU AND ADJOINING ANDHRA PRADESH COASTS. ALSO THE OCEAN HEAT CONTENT (OHC) IS 80-100 KJ/CM² OVER SOUTHWEST BOB AND LESS THAN 50 KJ/CM² 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 9TH 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 8TH 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 8TH DECEMBER EVENING. THERAFTER, 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 09TH 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 09TH DECEMBER

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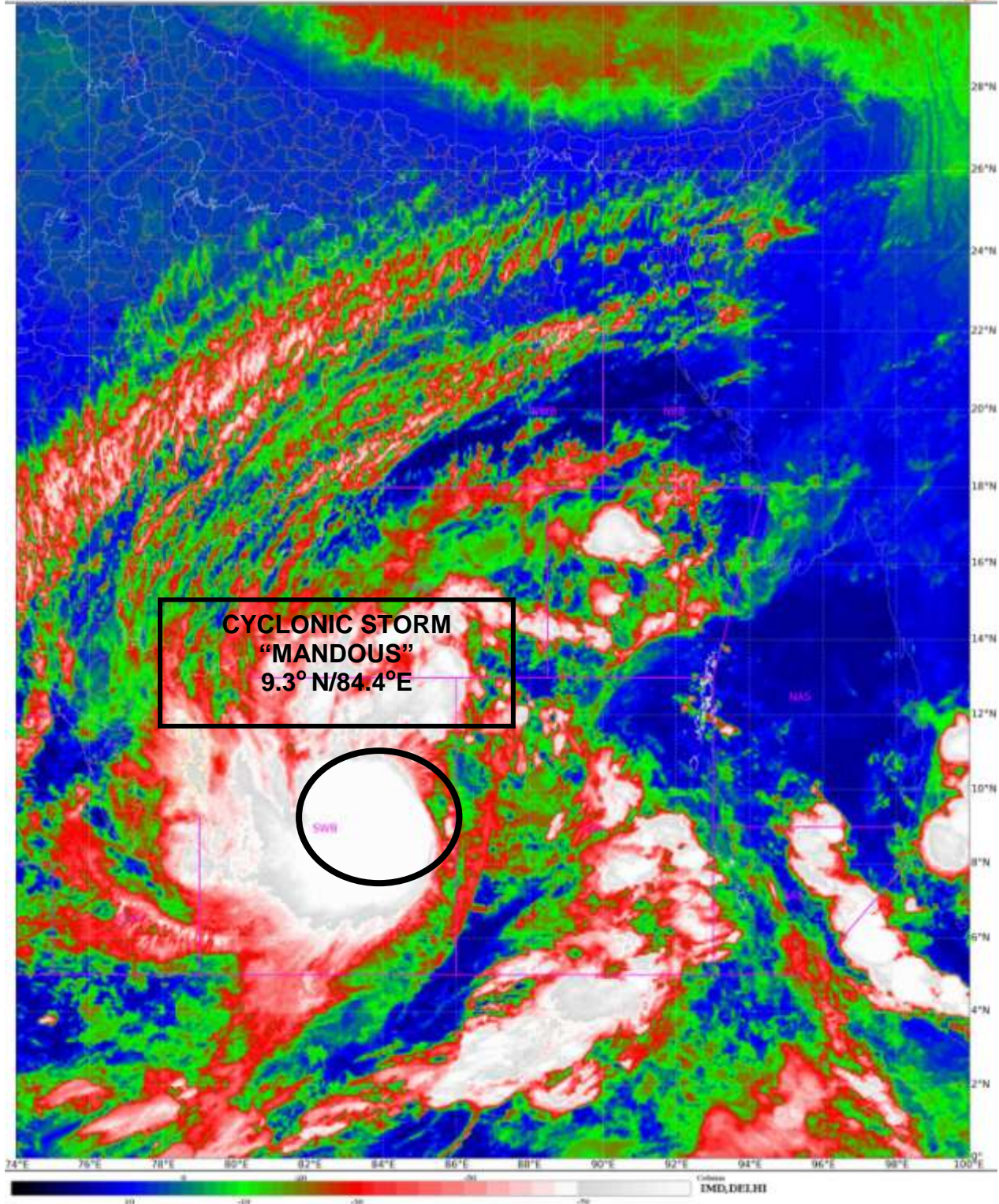


OBSERVED AND FORECAST TRACK OF CYCLONIC STORM “MANDOUS” OVER SOUTHWEST BAY OF BENGAL BASED ON 1800 UTC OF 07th DECEMBER, 2022.



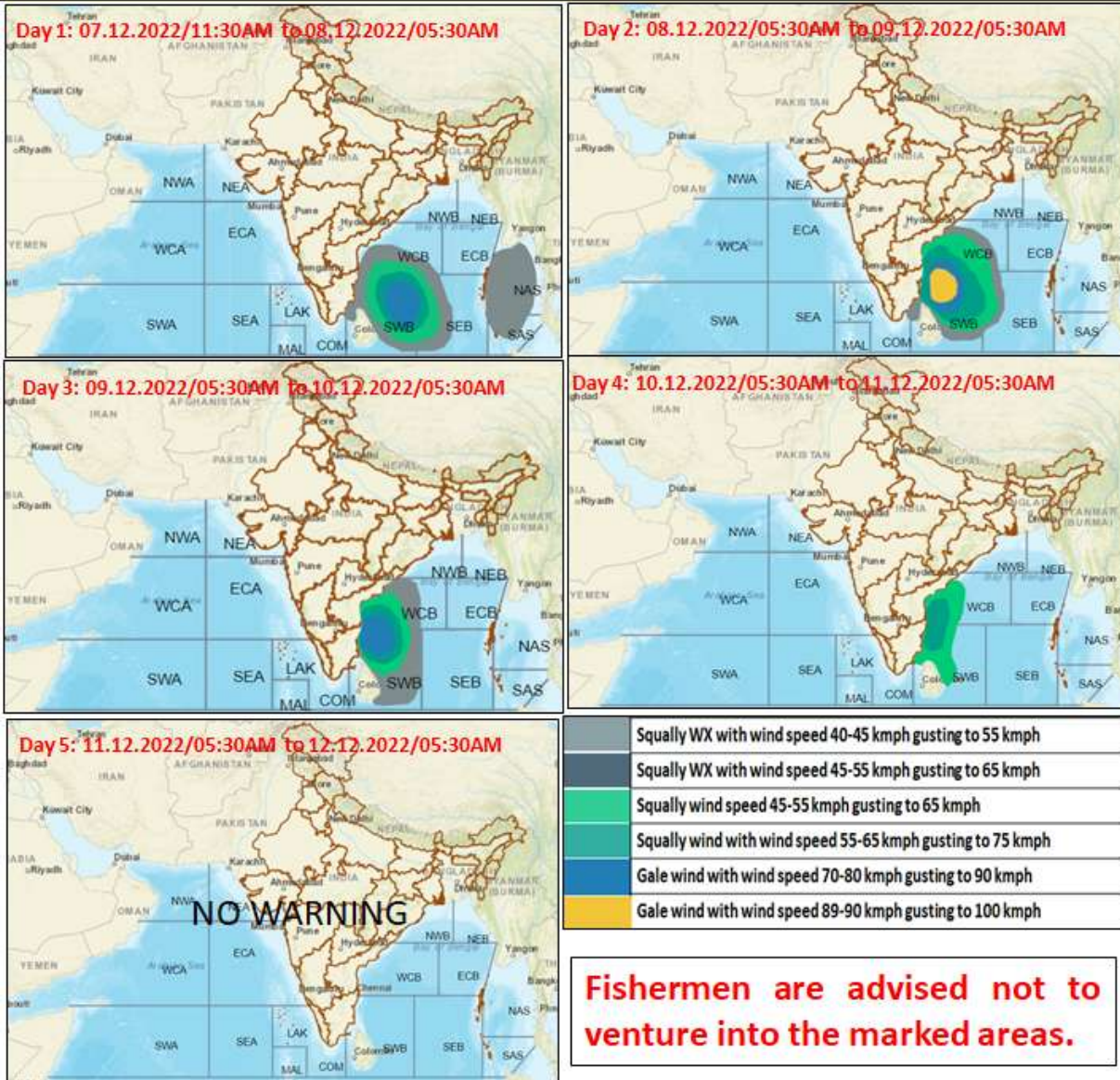
DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM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



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Fishermen warning graphics



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