



**India Meteorological Department  
(Ministry of Earth Sciences)**

**BULLETIN NO. 09 (BOB/09/2022)**

**TIME OF ISSUE: 0850 HOURS IST**

**DATED: 08.12.2022**

**FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)**

**TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)**

**CONTROL ROOM NDMA (FAX.NO. 26701729)**

**CABINET SECRETARIAT (FAX.NO.23012284, 23018638)**

**PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)**

**SECRETARY, MOES (FAX NO. 24629777)**

**H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)**

**DIRECTOR GENERAL, DOORDARSHAN (23385843)**

**DIRECTOR GENERAL, AIR (23421105, 23421219)**

**PIB MOES (FAX NO. 23389042)**

**UNI (FAX NO. 23355841)**

**D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)**

**DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)**

**CHIEF SECRETARY, ANDAMAN & NICOBAR ISLANDS (FAX NO. 03192- 232656)**

**CHIEF SECRETARY, GOVT. WEST BENGAL (FAX NO. 033-22144328)**

**CHIEF SECRETARY, GOVT. OF ODISHA (FAX NO. 0674 -2536660)**

**CHIEF SECRETARY, GOVT. OF ANDHRA PRADESH (FAX NO. 0863-2441029, 08645-246600)**

**CHIEF SECRETARY, GOVT. OF TAMIL NADU (FAX NO. 044-25672304)**

**CHIEF SECRETARY, GOVT. OF PUDUCHERRY (FAX NO. 0413-2337575, 2334145)**

**Sub: Cyclonic Storm “Mandous” pronounced as “Man-Dous” over Southwest Bay of Bengal (Cyclone Alert for north Tamil Nadu, Puducherry and south Andhra Pradesh coasts): Yellow Message**

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 6 hours, and lay centered at 0530 hours IST of today, the 08th December, 2022 over Southwest Bay of Bengal, near latitude 9.4°N and longitude 84.1°E, about 340 km east-northeast of Trincomalee (Sri Lanka), 470 km east-southeast of Jaffna (Sri Lanka), 530km east-southeast of Karaikal and about 620 km southeast of Chennai.

It is very likely to move west-northwestwards and cross north Tamil Nadu, Puducherry and adjoining south Andhra Pradesh coast between Puducherry and Sriharikota with a maximum sustained wind speed of 65-75 kmph gusting to 85 kmph around mid night of 09th December.

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

| <b>Date/Time(IST)</b> | <b>Position<br/>(Lat. °N/ long. °E)</b> | <b>Maximum sustained surface<br/>wind speed (Kmph)</b> | <b>Category of cyclonic<br/>disturbance</b> |
|-----------------------|---|--|---|
| 08.12.22/0530         | 9.4/84.1                                | 70-80 gusting to 90                                    | Cyclonic Storm                              |
| 08.12.22/1130         | 9.9/83.5                                | 80-90 gusting to 100                                   | Cyclonic Storm                              |
| 08.12.22/1730         | 10.3/82.9                               | 80-90 gusting to 100                                   | Cyclonic Storm                              |
| 08.12.22/2330         | 10.8/82.3                               | 80-90 gusting to 100                                   | Cyclonic Storm                              |
| 09.12.22/0530         | 11.3/81.7                               | 70-80 gusting to 90                                    | Cyclonic Storm                              |
| 09.12.22/1730         | 12.1/80.6                               | 55-65 gusting to 75                                    | Deep Depression                             |
| 10.12.22/0530         | 12.6/79.9                               | 40-50 gusting to 60                                    | Depression                                  |
| 10.12.22/1730         | 12.8/79.5                               | 30-40 gusting to 50                                    | Well Marked Low<br>Pressure Area            |

## **Warnings:**

### **(i) Rainfall (warning graphics enclosed)**

- ❖ Light to moderate rainfall at most places with **heavy to very heavy falls** at isolated places very likely over coastal Tamil Nadu, Puducherry & Karaikal and isolated **heavy rainfall** over adjoining areas of south coastal Andhra Pradesh and Rayalaseema on 08<sup>th</sup> December.
- ❖ Light to moderate rainfall at most places with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall at isolated places** very likely over north coastal Tamil Nadu, Puducherry and adjoining south Coastal Andhra Pradesh and isolated **heavy to very heavy rainfall** likely over north interior Tamilnadu and adjoining Rayalaseema on 09<sup>th</sup> December.
- ❖ It is likely to reduce to Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places likely over north Tamil Nadu and Rayalaseema and south Andhra Pradesh on 10<sup>th</sup> December.

### **(ii) Wind warning:**

- ❖ **Squally wind, speed reaching 40-45 kmph gusting to 55 kmph**, is likely to prevail over Southeast Bay of Bengal **on 8<sup>th</sup> Dec.**
- ❖ **Gale wind, speed reaching 70-80 kmph gusting to 90 kmph** prevailing over southwest Bay of Bengal. It would further increase becoming **80-90 kmph gusting to 100 kmph**, over the same region during 08<sup>th</sup> forenoon to 08<sup>th</sup> night. It would decrease thereafter gradually becoming **70-80 kmph gusting to 90 kmph**, over the same region during 08<sup>th</sup> forenoon to 08<sup>th</sup> night
- ❖ **Squally wind, speed reaching 40-50 kmph gusting to 60 kmph**, likely to commence along & off Tamil Nadu, Puducherry, south Andhra Pradesh and north Sri Lanka coasts coast from 08<sup>th</sup> December afternoon, becoming **50-60 kmph gusting to 70 kmph** from 08<sup>th</sup> December evening, **70-80 kmph gusting to 90 kmph** from 09<sup>th</sup> December afternoon to 09<sup>th</sup> December night. It is likely to reduce gradually to **50-60 kmph gusting to 70 kmph** by morning of 10<sup>th</sup> December and then to **40-50 kmph gusting to 60 kmph** by 10<sup>th</sup> December night.
- ❖ **Squally wind, speed reaching 40-50 kmph gusting to 60 kmph**, likely over Gulf of Mannar from 08<sup>th</sup> December evening becoming **50-60 kmph gusting to 70 kmph** from 09<sup>th</sup> December evening to 10<sup>th</sup> December morning. It is likely to reduce gradually thereafter.

### **(iii) Sea condition**

- ❖ **Sea condition likely to be very rough to high** over Southwest and adjoining areas of Westcentral Bay of Bengal till 10<sup>th</sup> morning and improve gradually thereafter.
- ❖ **Sea condition likely to be rough to very rough** along & off South Andhra Pradesh, Tamil Nadu, Puducherry and Sri Lanka coasts on 08<sup>th</sup> and 10<sup>th</sup> and **high** on 9<sup>th</sup> December.

### **(iv) Fishermen Warning (warning graphics enclosed)**

Fishermen are advised not to venture into:

- ❖ Southeast Bay of Bengal on 08<sup>th</sup> December.
- ❖ Southwest Bay of Bengal during 08<sup>th</sup>-10<sup>th</sup> December
- ❖ Along & off Sri Lanka coast during 08<sup>th</sup>-09<sup>th</sup> December.

- ❖ Along & off Tamilnadu, Puducherry and South Andhra Pradesh coasts and Gulf of Mannar during 08<sup>th</sup>-10<sup>th</sup> December.
- ❖ Fishermen out at sea should return to the coast or move to the safe area.

**(v) Adverse Weather Warning for onshore and off-shore operations**

Regulate on-shore and off-shore operations over Southwest Bay of Bengal; along & off Tamil Nadu-Puducherry-South Andhra Pradesh coasts and Gulf of Mannar during 08<sup>th</sup>-10<sup>th</sup> December.

**(vi) Damage expected over Coastal Tamilnadu, Puducherry and adjoining south coastal Andhra Pradesh**

- ❖ Damage to thatched houses/ huts. Unattached metal sheets may fly.
- ❖ Minor damage to power and communication lines.
- ❖ Major damage to Kutcha and some damage to Pucca roads. Flooding of escape routes.
- ❖ Breaking of tree branches, uprooting of small trees. Dead limbs blown from trees.
- ❖ Damage to banana and papaya trees and near coastal agriculture due to salt spray. Damage to paddy and other standing crops.
- ❖ Inundation/localized flooding in low lying areas due to heavy rains
- ❖ Traffic may be disrupted due to poor visibility in association with heavy rain

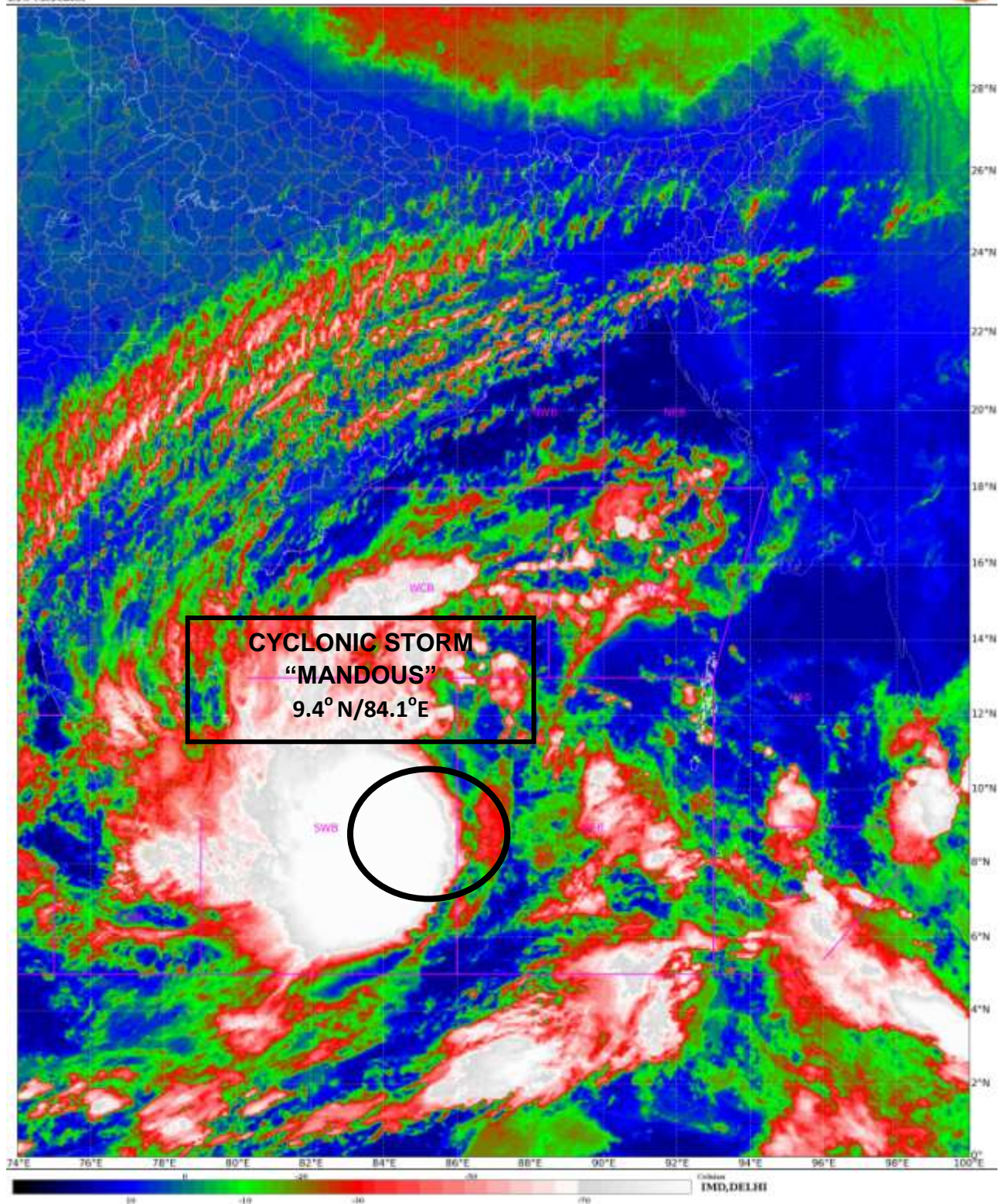
**(vii) Action suggested over Coastal Tamil Nadu, Puducherry and adjoining south coastal Andhra Pradesh**

- ❖ Total suspension of fishing operations during 08<sup>th</sup>-10<sup>th</sup> December.
- ❖ Regulate onshore and off-shore operations during 08<sup>th</sup>-10<sup>th</sup> December.
- ❖ People are advised to be cautious while going outside.
- ❖ Regulate traffic.
- ❖ People should not move nearby to vulnerable structures.

**System is under continuous surveillance and the next bulletin will be issued at 1130 hours IST of today, the 08<sup>th</sup> Dec, 2022.**

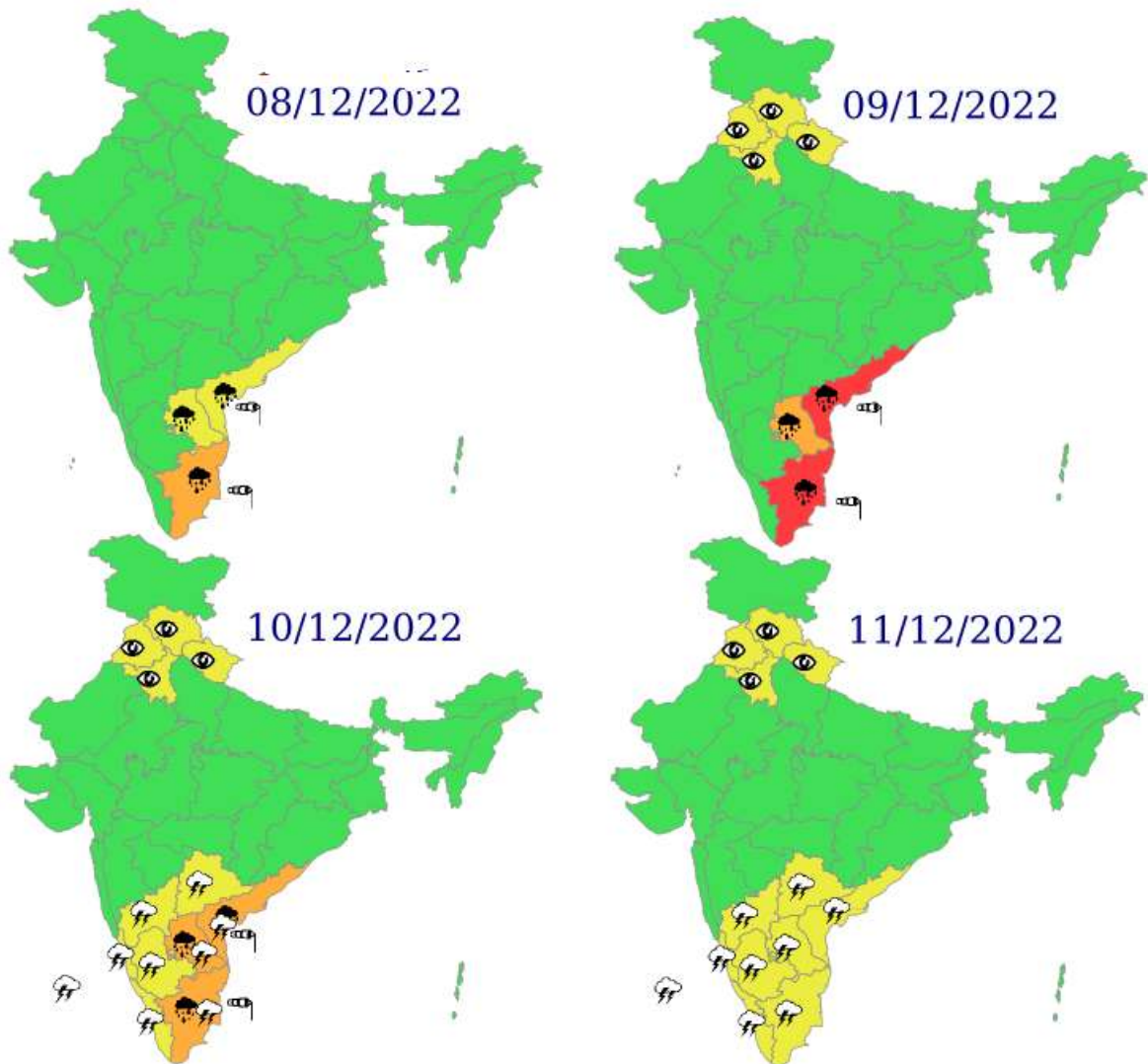
**(R. K. Jenamani)**  
**Scientist F, Cyclone Warning Division, New Delhi**

*Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWCVisakhapatnam/MO Port Blair*





## Multi hazard Warning Graphics



**LEGEND:** Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.





# **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



**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 |



## Fishermen warning graphics

