



India Meteorological Department  
(Ministry of Earth Sciences)

BULLETIN NO. 24 (BOB/09/2022)

TIME OF ISSUE: 0350 HOURS IST

DATED: 10.12.2022

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**Sub: Cyclonic Storm "Mandous" pronounced as "Man-Dous" crossed north Tamil Nadu coast close to Mamallapuram (Mahabalipuram).**

The cyclonic storm "Mandous" pronounced as "Man-Dous" over Southwest Bay of Bengal off north Tamil Nadu and Puducherry coasts moved northwestwards with a speed of 12 kmph during past 06 hours and crossed North Tamil Nadu & Puducherry coast and adjoining south Andhra Pradesh coasts near latitude 12.6°N and longitude 80.15°E, close to Mamallapuram (Mahabalipuram) during 2330 hrs IST of 09<sup>th</sup> December and 0130 hrs IST of 10<sup>th</sup> December as a Cyclonic Storm with the maximum sustained wind speed of 65-75 kmph gusting to 85 kmph. It lay centered at 0230 hours IST of today, the 10<sup>th</sup> December, 2022 over North Coastal Tamil Nadu near latitude 12.8°N and longitude 80.0°E, about 30 km northwest of Mamallapuram (Mahabalipuram) and 30 km southwest of Chennai.

It is very likely to move nearly west-northwestwards and gradually weaken into a Deep Depression by early morning and into a Depression by noon of 10<sup>th</sup> December.

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

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
10.12.22/0230	12.8/80.0	60-70 gusting to 80	Cyclonic Storm
10.12.22/0530	13.0/79.7	55-65 gusting to 75	Deep Depression
10.12.22/1130	13.1/79.3	40-50 gusting to 60	Depression

## **Warnings:**

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

- ❖ **10<sup>th</sup> December:-** Light to moderate rainfall at most places with **heavy to very heavy rainfall** at isolated places over north Tamil Nadu and Rayalaseema and adjoining south Andhra Pradesh.

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

- ❖ **Southwest Bay of Bengal:-** Gale wind, speed reaching 60-70 gusting to 80 kmph prevails over southwest Bay of Bengal during next 2 hours. It would decrease gradually becoming 55-65 kmph gusting to 75 kmph by 10<sup>th</sup> December early morning and 30-40 kmph gusting to 50 kmph by 10<sup>th</sup> December afternoon.
- ❖ **Along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts:-** Gale wind, speed reaching 60-70 kmph gusting to 80 kmph very likely to prevail during next 2 hours. It is likely to reduce gradually thereafter becoming 55-65 kmph gusting to 75 kmph by early morning of 10<sup>th</sup> December and 30-40 kmph gusting to 50 kmph by 10<sup>th</sup> December afternoon.
- ❖ **Gulf of Mannar:-** Squally wind, speed reaching 45-55 kmph gusting to 65 kmph likely to prevail over Gulf of Mannar till early hours of 10<sup>th</sup> December and reduce thereafter becoming 40-50 kmph gusting to 60 kmph by 10<sup>th</sup> December morning.
- ❖ **Westcentral Bay of Bengal:-** Squally wind, speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over adjoining areas of Westcentral Bay of Bengal off south Andhra Pradesh coast till 10<sup>th</sup> December early morning and reduce thereafter gradually becoming 30-40 kmph gusting to 50 kmph by 10<sup>th</sup> December afternoon.

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

- ❖ **Sea condition** likely to be **high** over Southwest Bay of Bengal till early hours of 10<sup>th</sup> December and would improve thereafter becoming very rough to rough from 10<sup>th</sup> December early morning to evening. The sea condition would be rough to very rough over adjoining areas of Westcentral Bay of Bengal till afternoon of 10<sup>th</sup> December.
- ❖ **Sea condition very likely to be high** along & off north Tamil Nadu and Puducherry coasts during next 2 hours and rough to very rough thereafter till 10<sup>th</sup> December afternoon. It is likely to be rough to very rough along and off north Srilanka and south Tamilnadu coasts till early morning of 10<sup>th</sup> December. It will gradually improve thereafter, becoming rough to very rough over these regions till 10<sup>th</sup> December afternoon.

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

Fishermen are advised not to venture into:

- ❖ Southwest Bay of Bengal till 10<sup>th</sup> December evening.
- ❖ Along & off north Sri Lanka coast till 10<sup>th</sup> December forenoon.
- ❖ Along & off Tamilnadu, Puducherry and South Andhra Pradesh coasts and Gulf of Mannar till 10<sup>th</sup> December evening.

### **(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 till 10<sup>th</sup> December afternoon.

**(vi) Damage expected over north Tamil Nadu, Puducherry and adjoining south Andhra Pradesh during next 6 hours.**

- ❖ Damage to thatched houses/ huts. Unattached metal sheets may fly.
- ❖ Minor damage to power and communication lines leading to partial disruption in power and communication.
- ❖ 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, papaya trees and near coastal agriculture due to salt spray.
- ❖ Damage to paddy, other standing crops and horticulture 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

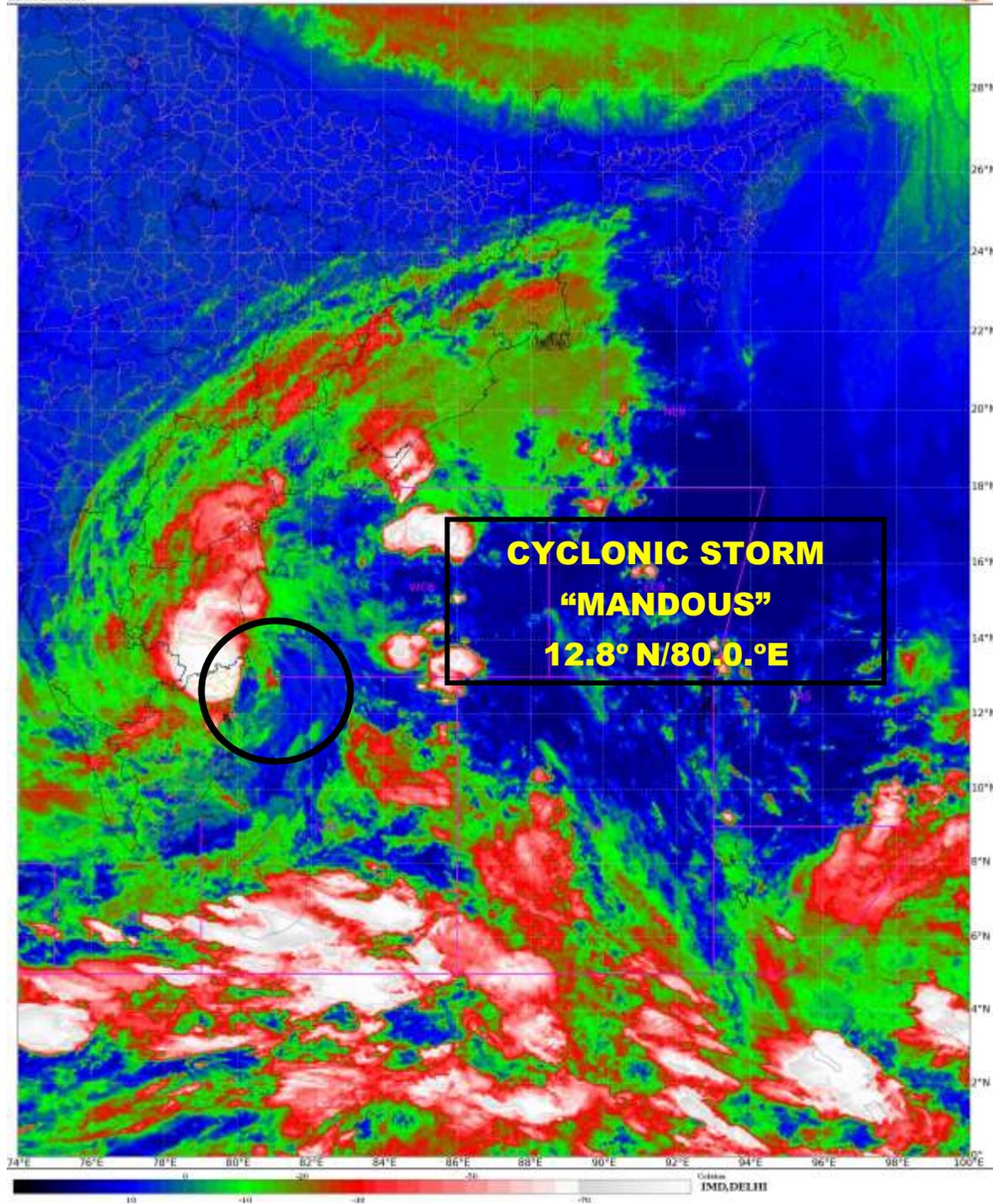
**(vii) Action suggested over north Tamil Nadu, Puducherry and adjoining south Andhra Pradesh**

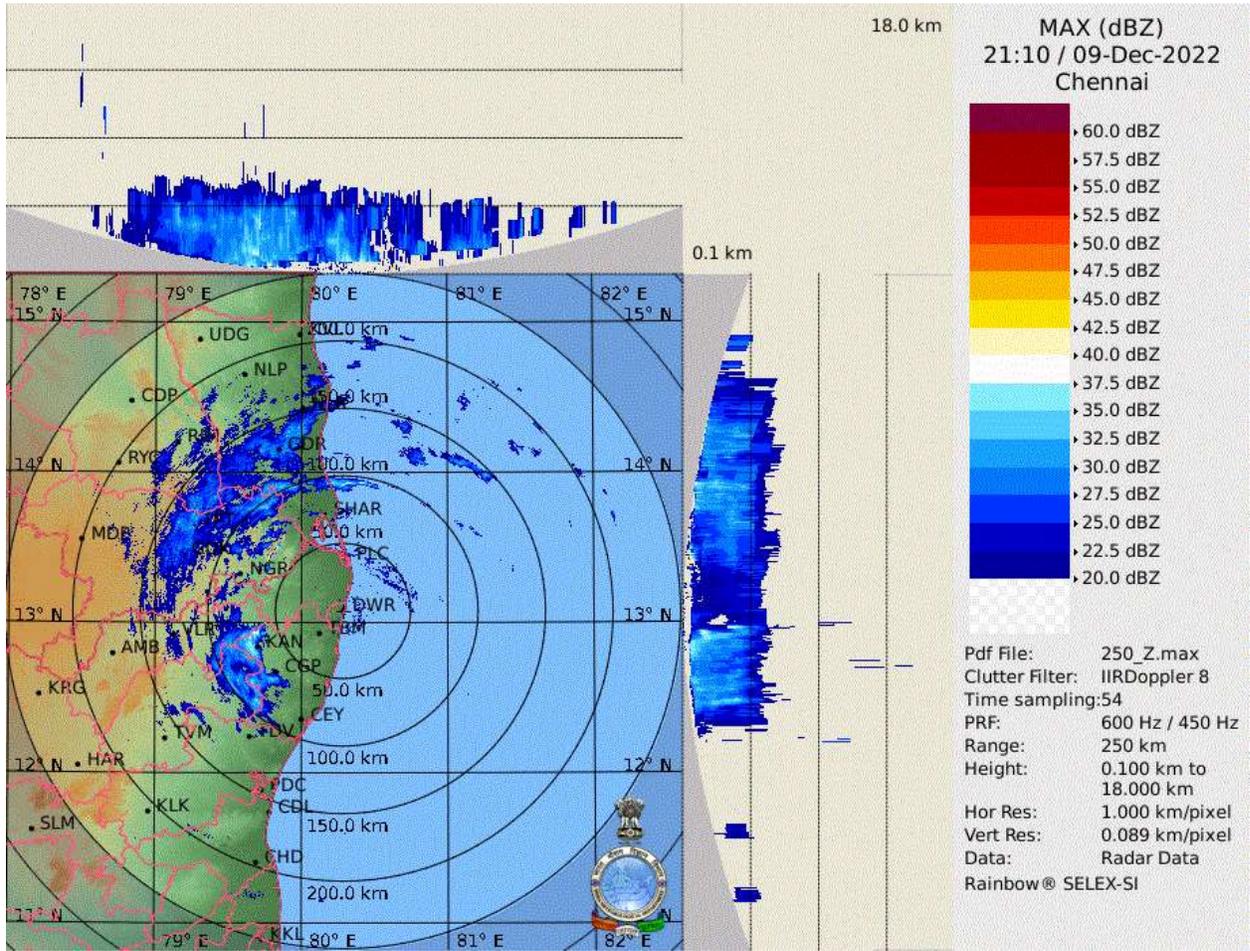
- ❖ People in north coastal Tamil Nadu and Puducherry to remain in safe places till 10<sup>th</sup> December morning.
- ❖ Total suspension of fishing operations till 10<sup>th</sup> December evening.
- ❖ Regulate onshore and off-shore operations till 10<sup>th</sup> December evening.
- ❖ People are advised 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 0830 hours IST of 10<sup>th</sup> Dec, 2022.**

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

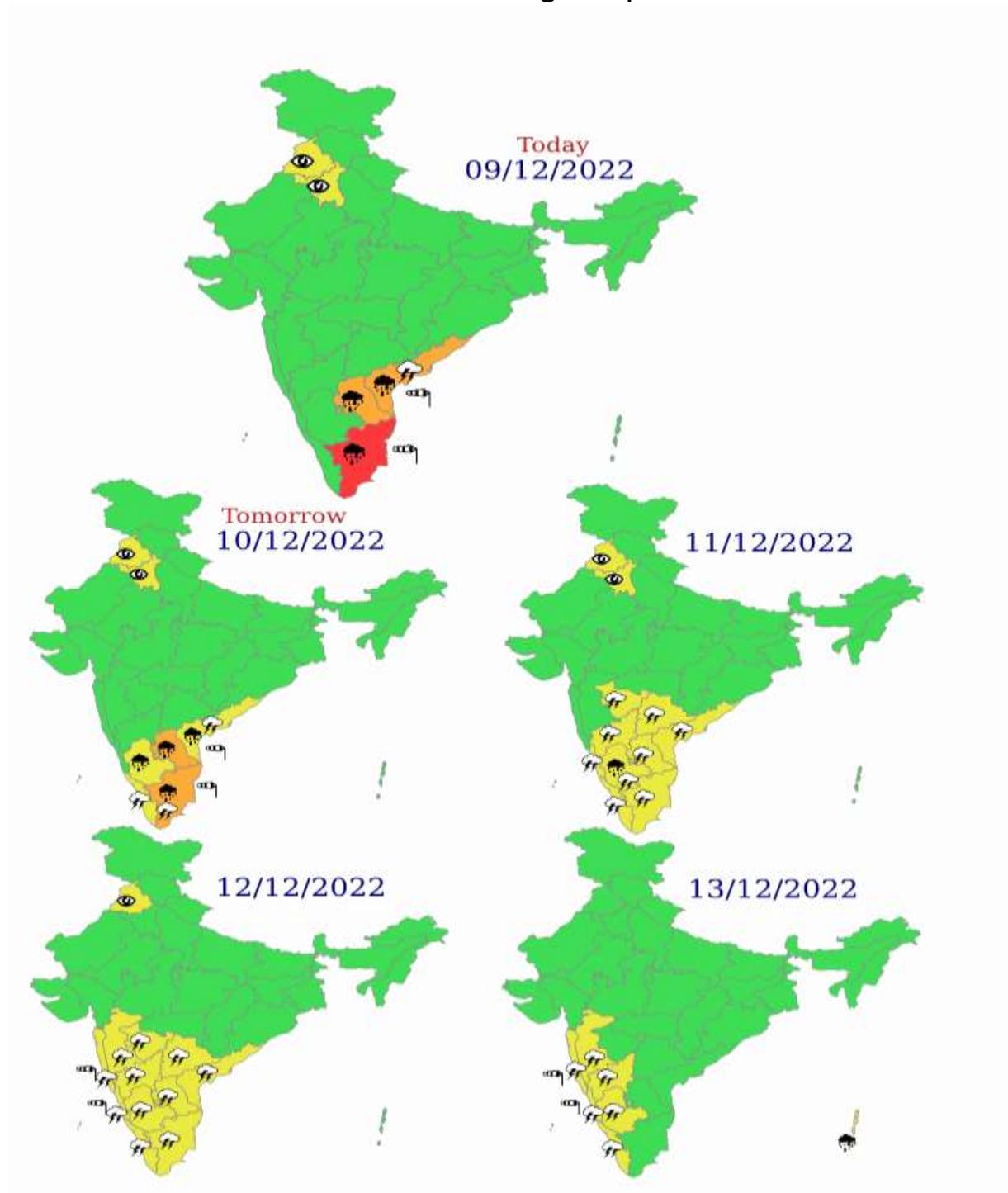
*Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWCVisakhapatnam/MO Port Blair*





**Radar Image from Doppler Weather Radar Chennai of 2110 UTC of 9<sup>th</sup> December 2022.**

# 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.

WARNING		Probabilistic Forecast		Heavy Rain		Heavy Snow		Thunderstorm		Dust Storm	
WARNING (TAKE ACTION)	Alert	Area	Probability of Occurrence (%)								
ALERT (BE PREPARED)	Alert	Low	< 25								
WATCH (BE UPDATES)	Alert	Low	25-50								
NO WARNING (NO ACTION)	Alert	Low	50-75								
	Alert	Low	> 75								



**OBSERVED AND FORECAST TRACK OF CYCLONIC STORM 'MANDOUS' OVER NORTH COASTAL TAMIL NADU BASED ON 2100 UTC OF 09<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 NORTH COASTAL TAMIL NADU BASED ON 2100 UTC OF 09<sup>th</sup> DECEMBER, 2022.**



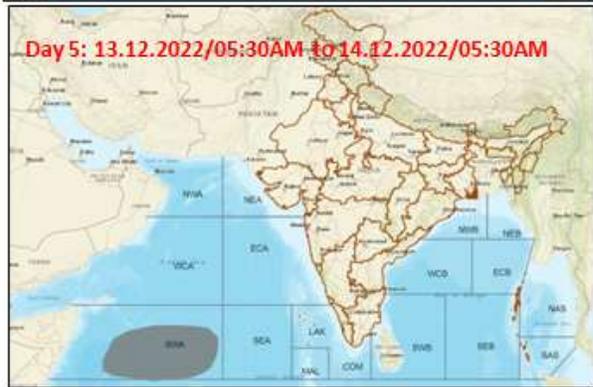
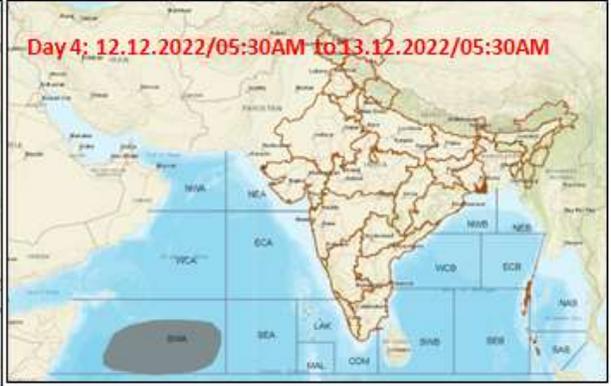
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)  
 SuCS: SUPER CYCLONIC STORM (≥20 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



	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

Fishermen are advised not to venture into the marked areas.