



India Meteorological Department  
(Ministry of Earth Sciences)

BULLETIN NO. 12 (BoB/02/2023)

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**Sub: Cyclonic storm "Mocha" pronounced as "Mokha" over southeast Bay of Bengal intensified into a Severe Cyclonic Storm**

The cyclonic storm "**Mocha**" pronounced as "**Mokha**" over southeast Bay of Bengal moved northwards with a speed of 11 kmph during past 06 hours, intensified into a Severe Cyclonic Storm and lay centered at 1730 hours IST of today, the 11th May 2023 over the same region near latitude 12.2°N and longitude 88.0°E, about 520 km west of Port Blair, 1100 km south-southwest of Cox's Bazar (Bangladesh) and 1020 km south-southwest of Sittwe (Myanmar).

It is very likely to move nearly northwards during next 12 hours and intensify into a very severe cyclonic storm by 12th May morning over central Bay of Bengal. Thereafter, it is likely to recurve gradually and move north-northeastwards with further intensification. It is likely to cross southeast Bangladesh and north Myanmar coasts between Cox's Bazar (Bangladesh) and Kyaukpyu (Myanmar), close to Sittwe (Myanmar) around noon of 14th May, 2023 as a very severe cyclonic storm with maximum sustained wind speed of 150-160 kmph gusting to 175 kmph.

Forecast track and intensity are given below:

<b>Date/Time (IST)</b>	<b>Position (Lat. °N/ long. °E)</b>	<b>Maximum sustained surface wind speed (Kmph)</b>	<b>Category of cyclonic disturbance</b>
11.05.23/1730	12.2/88.0	85-95 gusting to 105	Severe Cyclonic Storm
11.05.23/2330	12.6/88.1	95-105 gusting to 115	Severe Cyclonic Storm
12.05.23/0530	13.1/88.2	115-125 gusting to 135	Very Severe Cyclonic Storm
12.05.23/1130	13.8/88.3	125-135 gusting to 150	Very Severe Cyclonic Storm
12.05.23/1730	14.5/88.6	135-145 gusting to 160	Very Severe Cyclonic Storm
13.05.23/0530	15.9/89.4	145-155 gusting to 170	Very Severe Cyclonic Storm
13.05.23/1730	17.5/90.5	150-160 gusting to 175	Very Severe Cyclonic Storm
14.05.23/0530	19.1/91.9	150-160 gusting to 175	Very Severe Cyclonic Storm
14.05.23/1730	21.3/93.7	105-115 gusting to 125	Severe Cyclonic Storm
15.05.23/0530	23.6/95.5	55-65 gusting to 75	Deep Depression

**Warnings:**

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

- ❖ **Andaman & Nicobar Islands:** Rainfall at most places with Heavy rainfall at isolated places is likely on 11<sup>th</sup> May Heavy to very heavy at isolated places is likely on 12<sup>th</sup> May and heavy rainfall at isolated places during 13<sup>th</sup> and 14<sup>th</sup> May.
- ❖ **Tripura & Mizoram:** Rainfall at most places with Heavy rainfall at isolated places is likely on 13<sup>th</sup> May and heavy to very heavy rainfall at isolated places on 14<sup>th</sup> May.
- ❖ **Nagaland, Manipur & south Assam:** Rainfall at many places with Heavy rainfall at isolated places is on 14<sup>th</sup> May.

**(ii) Wind warning:**

- ❖ **Andaman & Nicobar Islands:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail on 11<sup>th</sup> May.
- ❖ **Tripura, Mizoram & south Manipur:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is very likely to prevail on 14<sup>th</sup> May.
- ❖ **Andaman Sea:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over North Andaman Sea till 12<sup>th</sup> May.
- ❖ **Southeast Bay of Bengal:** Gale wind speed reaching 85-95 kmph gusting to 105 kmph is prevailing and likely to become Gale wind speed reaching 115-125 kmph gusting to 135 kmph is likely by 12<sup>th</sup> May morning to evening and decrease thereafter becoming squally wind speed reaching 55-65 kmph gusting to 75 kmph on 13<sup>th</sup> May.
- ❖ **Adjoining areas of southwest Bay of Bengal:** Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely on 11<sup>th</sup> May.
- ❖ **Eastcentral Bay of Bengal:** Gale wind speed reaching 70-80 kmph gusting to 90 kmph is prevailing and likely to become Gale wind speed reaching 115-125 kmph gusting to 135 kmph is likely on 12<sup>th</sup> May early morning, 140-150 kmph gusting to 165 kmph from 12<sup>th</sup> May evening and 150-160 kmph gusting to 175 kmph till 14<sup>th</sup> May morning and gradually decrease thereafter.

- ❖ **Westcentral Bay of Bengal:**  
Gale wind speed reaching 70-80 kmph gusting to 90 kmph is prevailing and likely to become 115-125 kmph gusting to 135 kmph is likely on 12<sup>th</sup> May morning and 135-145 gusting to 160 kmph till 13<sup>th</sup> May morning. It will decrease gradually becoming 90-100 kmph gusting to 110 kmph by 13<sup>th</sup> May evening and significantly decreased thereafter.
- ❖ **Northeast Bay of Bengal:**  
Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely on 12<sup>th</sup> May. Gale wind speed reaching 90-100 kmph gusting to 110 kmph is likely to commence from 13<sup>th</sup> May morning and gradually increase and becoming 150-160 kmph gusting 175 kmph from 13<sup>th</sup> evening till 14<sup>th</sup> May noon. It is likely to decrease rapidly after the land fall.
- ❖ **Adjoining areas of Northwest Bay of Bengal:**  
Gale wind speed reaching 60-70 kmph gusting to 80 kmph is likely to prevail from 13<sup>th</sup> May to 14<sup>th</sup> May forenoon and decrease gradually thereafter.

### (iii) Sea condition

- ❖ **Andaman Sea:**  
Very rough over Andaman Sea on 11<sup>th</sup> May.  
Very rough to rough over north Andaman Sea during 12<sup>th</sup> & 13<sup>th</sup> May.
- ❖ **Southeast Bay of Bengal:**  
high to very high sea condition is likely to prevail till 12<sup>th</sup> May.  
Very rough to rough on 13<sup>th</sup> May.
- ❖ **Eastcentral Bay of Bengal:**  
High sea condition is prevailing and likely to become very high from 11<sup>th</sup> midnight and phenomenal from 12<sup>th</sup> May to 14<sup>th</sup> May forenoon. It will improve thereafter.
- ❖ **Adjoining areas of Westcentral Bay of Bengal:**  
Very rough to high sea condition is prevailing and likely to become very high from 11<sup>th</sup> midnight and phenomenal from 12<sup>th</sup> May morning to 13<sup>th</sup> May morning. It will gradually improve thereafter.
- ❖ **Northeast Bay of Bengal:**  
Rough to very rough on 12<sup>th</sup> May.  
Phenomenal during 13<sup>th</sup> & 14<sup>th</sup> May.
- ❖ **Adjoining areas of Northwest Bay of Bengal:**  
Rough to very rough during 13<sup>th</sup> & 14<sup>th</sup> May.

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

- ❖ Fishermen, ships, boats and trawlers are advised not to venture into southeast Bay of Bengal and adjoining Andaman Sea till 11<sup>th</sup> May, central Bay of Bengal and north Andaman Sea till 14<sup>th</sup> May, and into northeast Bay of Bengal during 12<sup>th</sup>-14<sup>th</sup> May.
- ❖ Those over central Bay of Bengal and north Andaman Sea are advised to return to coast.

### (v) Damage expected & Action suggested: Mizoram, Tripura, and South Manipur

- ❖ Minor Damage to loose/unsecured structures
- ❖ Some breaches in kutcha road due to heavy rain with the possibility of landslide, in vulnerable areas
- ❖ Uprooting of small trees and breaking of tree branches.
- ❖ Damage to small trees like Banana, Drum stick and Papaya etc.
- ❖ Damage to standing crops

#### **Action Suggested**

- ❖ Immediately harvest mature fruits and crops.

- ❖ Provide staking and cover to vegetables nurseries, fruit orchards.
- ❖ Avoid application of fertilizers and pesticides.
- ❖ Keep livestock inside sheds

**(vi) Damage expected & Action suggested: Marine community (shipping, offshore industries, Tourism etc. over Bay of Bengal, Andaman Sea & Andaman & Nicobar Islands)**

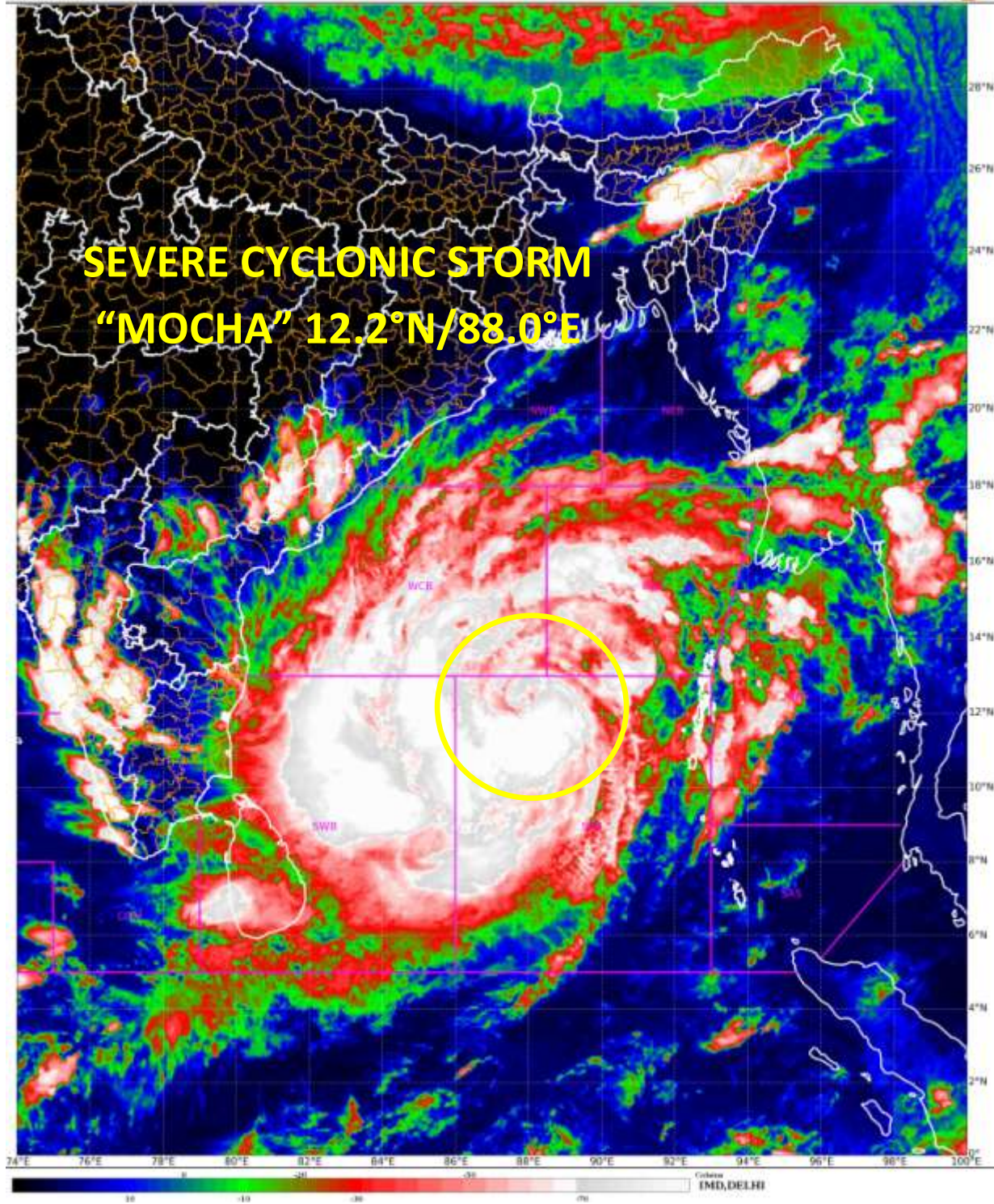
- ❖ Very rough to phenomenal sea could effect marine operation and offshore activities.
- ❖ Regulation of tourism and offshore activities and shipping near Andaman & Nicobar Islands till 13<sup>th</sup> May.
- ❖ Regulation of shipping activity over the sea areas of southeast Bay of Bengal and Andaman Sea till 12<sup>th</sup> May, eastcentral Bay of Bengal till 14<sup>th</sup> May, and westcentral Bay of Bengal till 13<sup>th</sup> May.
- ❖ Regulation of shipping activity over the sea areas of northeast Bay of Bengal during 12<sup>th</sup>-14<sup>th</sup> May.

**The system is under continuous surveillance and the next message will be issued at 2330 hours IST of today, the 11<sup>th</sup> May 2023.**

**(Dr. Ananda Kumar Das)**

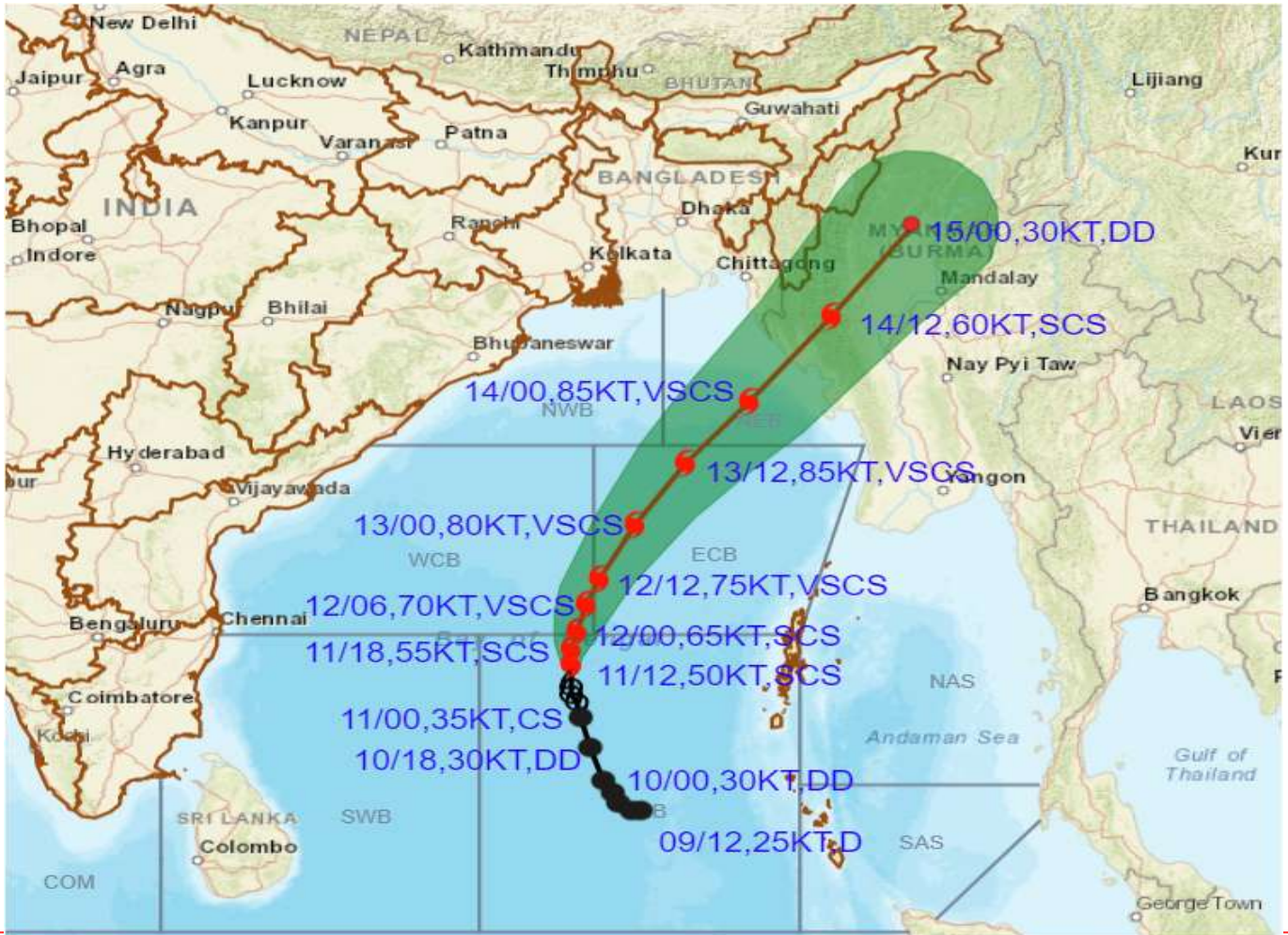
**Scientist F, Cyclone Warning Division, New Delhi**

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





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF SEVERE CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 1200 UTC (1730 IST) OF 11<sup>TH</sup> MAY 2023.**



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

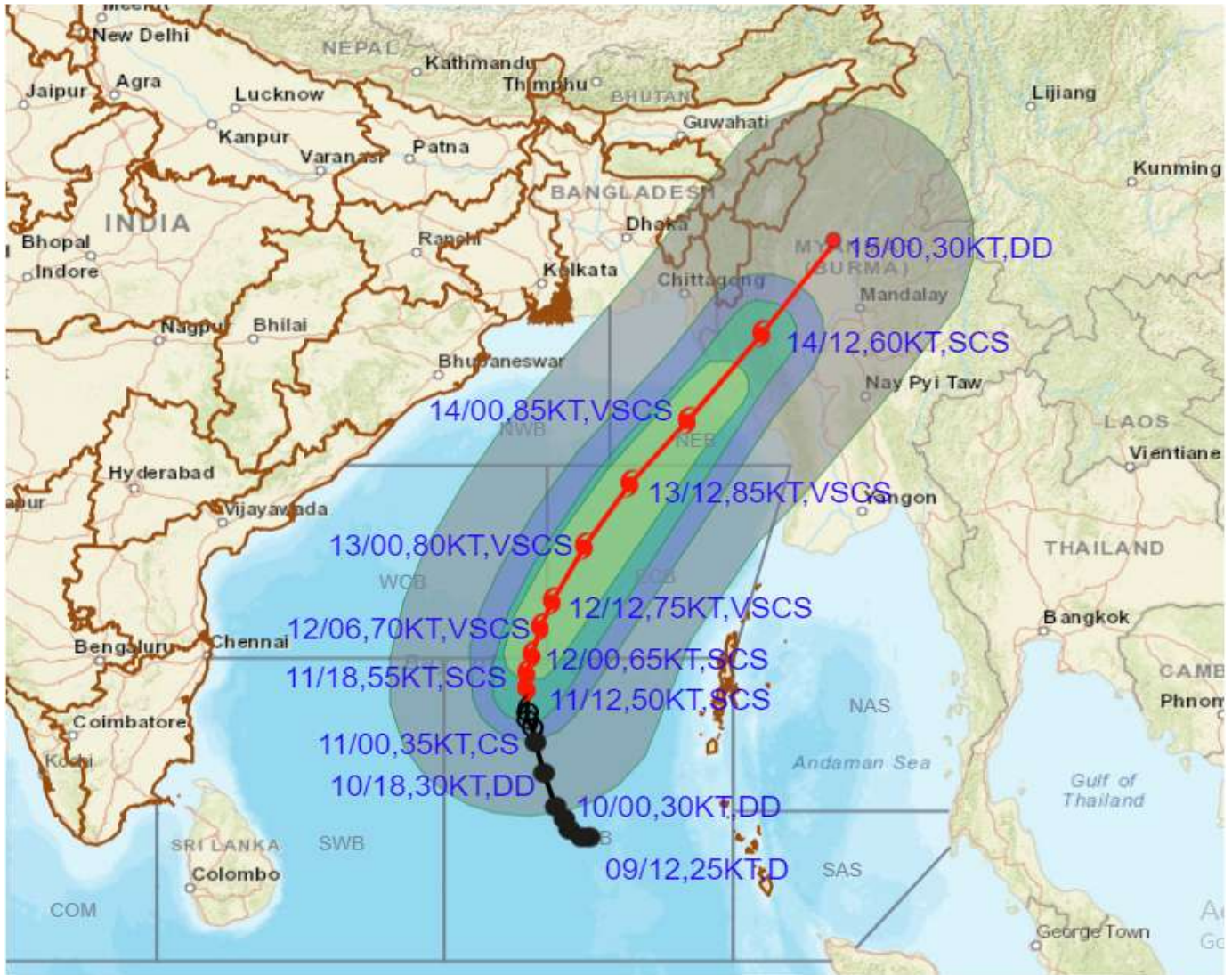
— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF SEVERE CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 1200 UTC (1730 IST) OF 11<sup>TH</sup> MAY 2023.**



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)

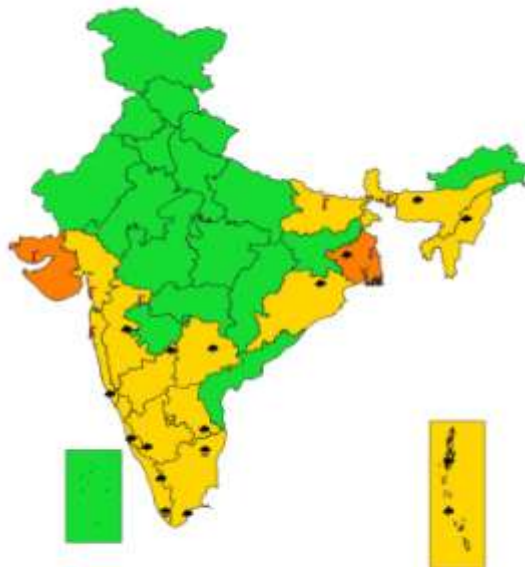
● LESS THAN 34 KT  
 ○ 34-47 KT  
 ● ≥ 48 KT  
 — OBSERVED TRACK  
 — FORECAST TRACK  
 ▲ CONE OF UNCERTAINTY  
 AREA OF MAXIMUM SUSTAINED WIND SPEED:  
 ■ 28-33 KT (52-61 KMPH)  
 ■ 34-49 KT (62-91 KMPH)  
 ■ 50-63 KT (92-117 KMPH)  
 ■ ≥ 64 KT (≥118 KMPH)

**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



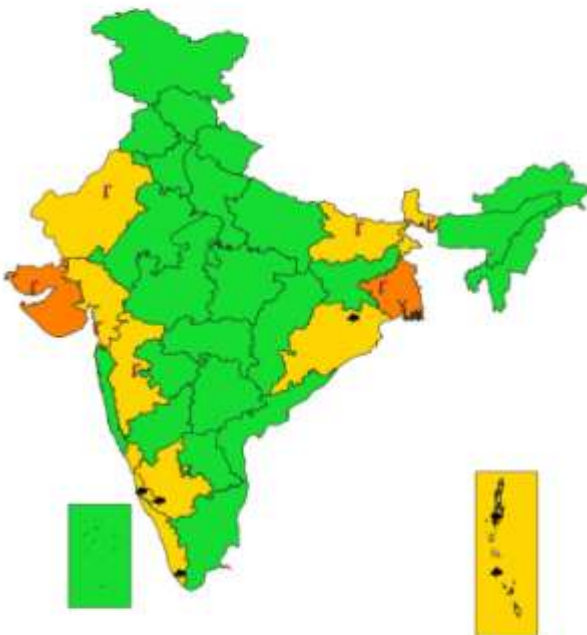
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
( 11-5-2023 )**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ● Heavy Rain                | h Strong Surface Winds | NO WARNING               |
| ○ Heavy Snow                | ↑ Heat Wave            | WATCH (BE UPDATED)       |
| ⚡ Thunderstorms & Lightning | ↓ Cold wave            | ALERT (BE PREPARED)      |
| ◻ Hailstorm                 | ☁ Fog                  | WARNING (TAKE ACTION)    |



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
( 12-5-2023 )**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ● Heavy Rain                | h Strong Surface Winds | NO WARNING               |
| ○ Heavy Snow                | ↑ Heat Wave            | WATCH (BE UPDATED)       |
| ⚡ Thunderstorms & Lightning | ↓ Cold wave            | ALERT (BE PREPARED)      |
| ◻ Hailstorm                 | ☁ Fog                  | WARNING (TAKE ACTION)    |



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
( 13-5-2023 )**

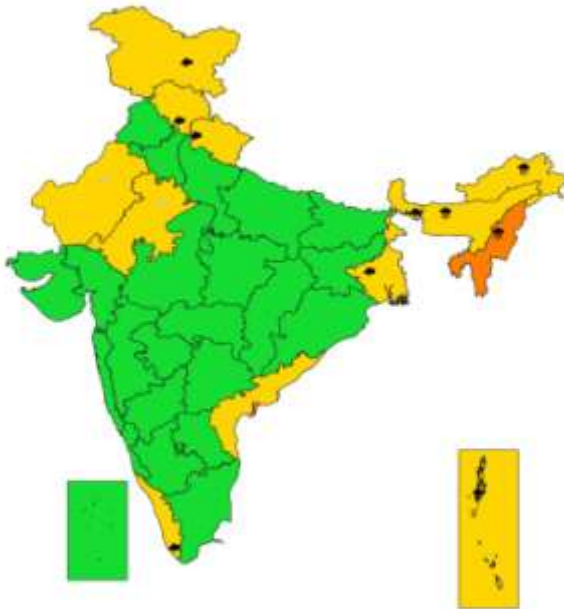


- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ● Heavy Rain                | h Strong Surface Winds | NO WARNING               |
| ○ Heavy Snow                | ↑ Heat Wave            | WATCH (BE UPDATED)       |
| ⚡ Thunderstorms & Lightning | ↓ Cold wave            | ALERT (BE PREPARED)      |
| ◻ Hailstorm                 | ☁ Fog                  | WARNING (TAKE ACTION)    |





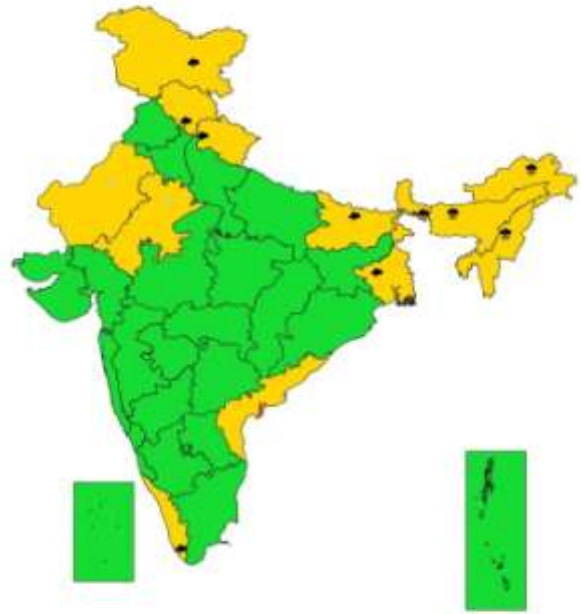
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
( 14-5-2023)**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ☁ Heavy Rain                | 🌪 Strong Surface Winds | 🟢 NO WARNING             |
| ❄ Heavy Snow                | 🔥 Heat Wave            | 🟡 WATCH (BE UPDATED)     |
| ⚡ Thunderstorms & Lightning | 🌡 Cold wave            | 🟠 ALERT (BE PREPARED)    |
| ☁ Halstorm                  | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |

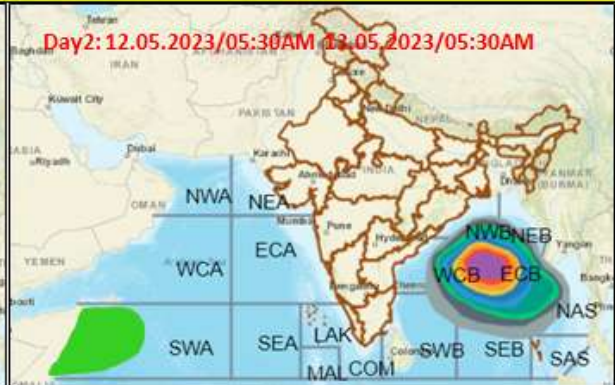
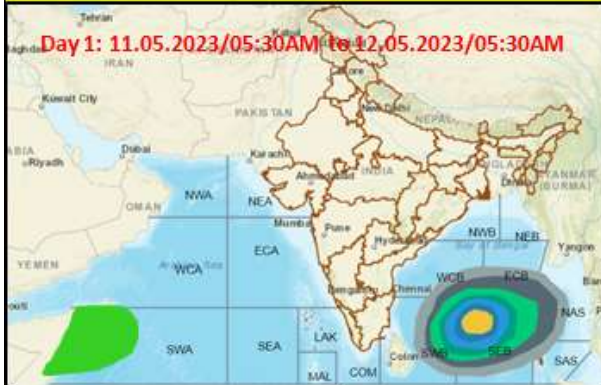


**SUBDIVISIONWISE WEATHER WARNING FOR DAY 5  
( 15-5-2023)**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ☁ Heavy Rain                | 🌪 Strong Surface Winds | 🟢 NO WARNING             |
| ❄ Heavy Snow                | 🔥 Heat Wave            | 🟡 WATCH (BE UPDATED)     |
| ⚡ Thunderstorms & Lightning | 🌡 Cold wave            | 🟠 ALERT (BE PREPARED)    |
| ☁ Halstorm                  | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |

## Fishermen warning graphics



	Squally WX with wind speed 40-50 kmph gusting to 60 kmph
	Squally WX with wind speed 50-60 kmph gusting to 70 kmph
	Gale wind speed 60-70 kmph gusting to 80 kmph
	Gale wind with wind speed 70-80 kmph gusting to 90 kmph
	Gale wind with wind speed 80-90 kmph gusting to 100 kmph
	Gale wind with wind speed 90-100 kmph gusting to 110 kmph
	Gale wind with wind speed 100-110 kmph gusting to 120 kmph
	Gale wind with wind speed 110-120 kmph gusting to 140 kmph
	Gale wind with wind speed 130-140 kmph gusting to 150 kmph
	Gale wind with wind speed 140-150 kmph gusting to 160 kmph

**FISHERMEN ARE ADVISED NOT TO VENTURE INTO THE MARKED AREAS**