



India Meteorological Department  
(Ministry of Earth Sciences)

BULLETIN NO. 19 (BoB/02/2023)

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

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**Sub: Very Severe Cyclonic storm "Mocha" (pronounced as "Mokha") over Central Bay of Bengal**

The **Very Severe Cyclonic Storm "Mocha"** (pronounced as "**Mokha**") over Central and adjoining Southeast Bay of Bengal moved nearly north-northeastwards with a speed of 13 kmph during past 06 hours and lay centered at 1430 hours IST of today, the 12th May 2023 over Central Bay of Bengal near latitude 14.3°N and longitude 88.4°E, about 550 km west-northwest of Port Blair, 870 km south-southwest of Cox's Bazar (Bangladesh) and 800 km south-southwest of Sittwe (Myanmar).

It is very likely to move north-northeastwards and intensify further into an Extremely Severe Cyclonic Storm over Eastcentral Bay of Bengal during night of today, the 12<sup>th</sup> May 2023. 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:

Date/Time (IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
12.05.23/1430	14.3/88.4	135-145 gusting to 155	Very Severe Cyclonic Storm
12.05.23/1730	14.6/88.6	140-150 gusting to 165	Very Severe Cyclonic Storm
12.05.23/2330	15.2/88.9	160-170 gusting to 185	Extremely Severe Cyclonic Storm
13.05.23/0530	15.9/89.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
13.05.23/1130	16.7/89.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
13.05.23/2330	18.4/91.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
14.05.23/1130	20.2/92.8	150-160 gusting to 175	Very Severe Cyclonic Storm
14.05.23/2330	22.2/94.5	70-80 gusting to 90	Cyclonic Storm

**Warnings:**

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

- ❖ **Andaman & Nicobar Islands:** Rainfall at most places with Heavy rainfall at isolated places is likely on 12<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 Islands:**  
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail on 12<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.
- ❖ **North Andaman Sea:**  
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over North Andaman Sea on 12<sup>th</sup> May and 45-55 kmph gusting 65 kmph on 13<sup>th</sup> May.
- ❖ **Southeast Bay of Bengal:**  
Gale wind speed reaching 115-125 kmph gusting to 145 kmph is prevailing and likely to continue till 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 50-60 kmph gusting to 70 kmph is likely to prevail till 13<sup>th</sup> May morning.
- ❖ **Eastcentral Bay of Bengal:**  
Gale wind speed reaching 135-145 kmph gusting to 160 kmph is prevailing over the region. It is very likely to increase becoming Gale wind speed reaching 160-170 kmph gusting to 185 kmph during 12<sup>th</sup> May evening and 180-190 kmph gusting to 210 kmph till 13<sup>th</sup> May evening and gradually decrease thereafter.

- ❖ **Westcentral Bay of Bengal:**  
Gale wind speed reaching 135-145 kmph gusting to 160 kmph is likely to prevail on 12<sup>th</sup> May and becoming 150-160 kmph gusting to 185 kmph over southeastern sector of the region 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 decrease thereafter.
- ❖ **Northeast Bay of Bengal:**  
Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely from evening of 12<sup>th</sup> May becoming gale wind speed reaching 70-80 gusting to 90 kmph from 13<sup>th</sup> May morning and would gradually increase becoming 180-190 kmph gusting 210 kmph from 13<sup>th</sup> evening till 14<sup>th</sup> May morning. It is likely to decrease thereafter to 150-16 kmph gusting to 175 kmph at the time of landfall. It is likely to decrease rapidly after the landfall.
- ❖ **Adjoining areas of Northwest Bay of Bengal:**  
Gale wind speed reaching 60-70 kmph gusting to 80 kmph is likely to prevail over southeast sector of the region and 45-55 kmph gusting to 65 kmph over the remaining areas of northwest Bay of Bengal from 13<sup>th</sup> May to 14<sup>th</sup> May forenoon and decrease gradually thereafter.

### (iii) Sea condition

- ❖ **Andaman Sea:**  
Very rough to rough over north Andaman Sea during 12<sup>th</sup>-13<sup>th</sup> May.
- ❖ **Southeast Bay of Bengal:**  
Very high to phenomenal sea condition is likely to prevail on 12<sup>th</sup> May.  
Very rough to rough on 13<sup>th</sup> May.
- ❖ **Eastcentral Bay of Bengal:**  
Very High to phenomenal sea condition is prevailing and would continue to be phenomenal till 14<sup>th</sup> May morning. It will improve gradually thereafter.
- ❖ **Adjoining areas of Westcentral Bay of Bengal:**  
Very high to phenomenal sea condition is prevailing and would continue to be phenomenal till 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. It would become very rough to high till 13<sup>th</sup> May evening and very high to phenomenal till 14<sup>th</sup> May afternoon.
- ❖ **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 till 12<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 & northeast 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 2030 hours IST of today, the 12<sup>th</sup> May 2023.**

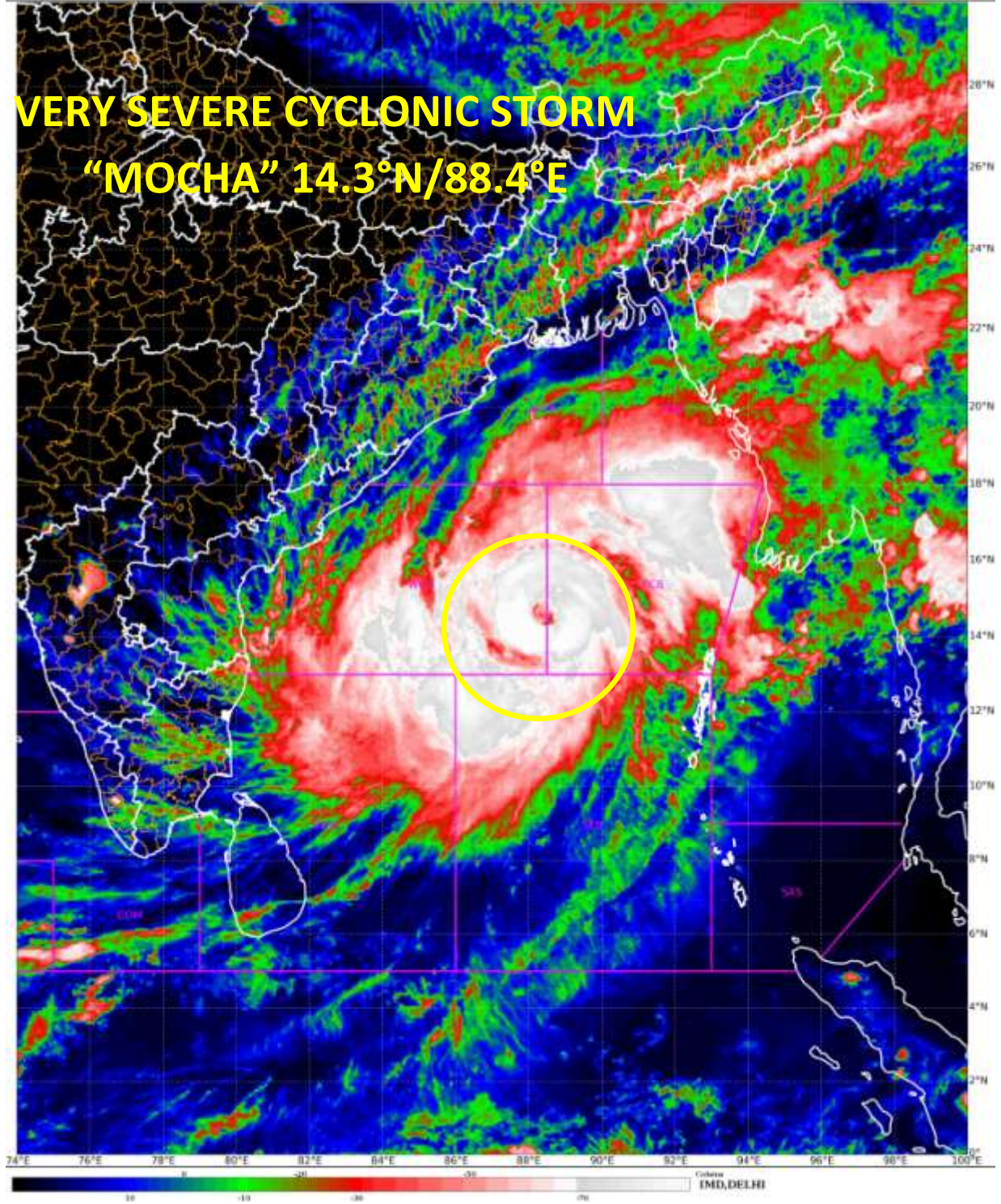
**(Dr. Ananda Kumar Das)**

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

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

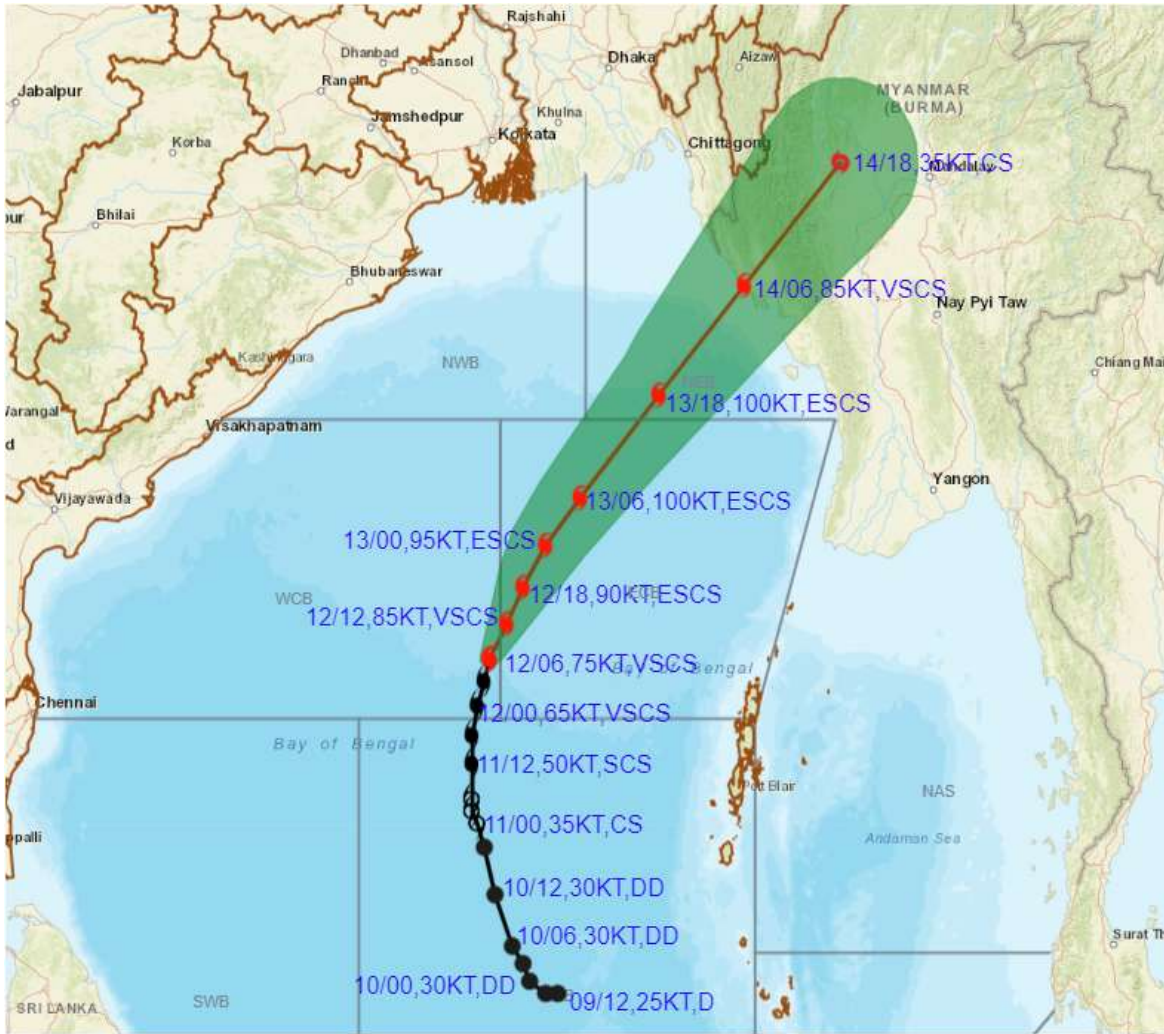


# VERY SEVERE CYCLONIC STORM "MOCHA" 14.3°N/88.4°E





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF VERY SEVERE CYCLONIC STORM MOCHA OVER CENTRAL BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 12<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)

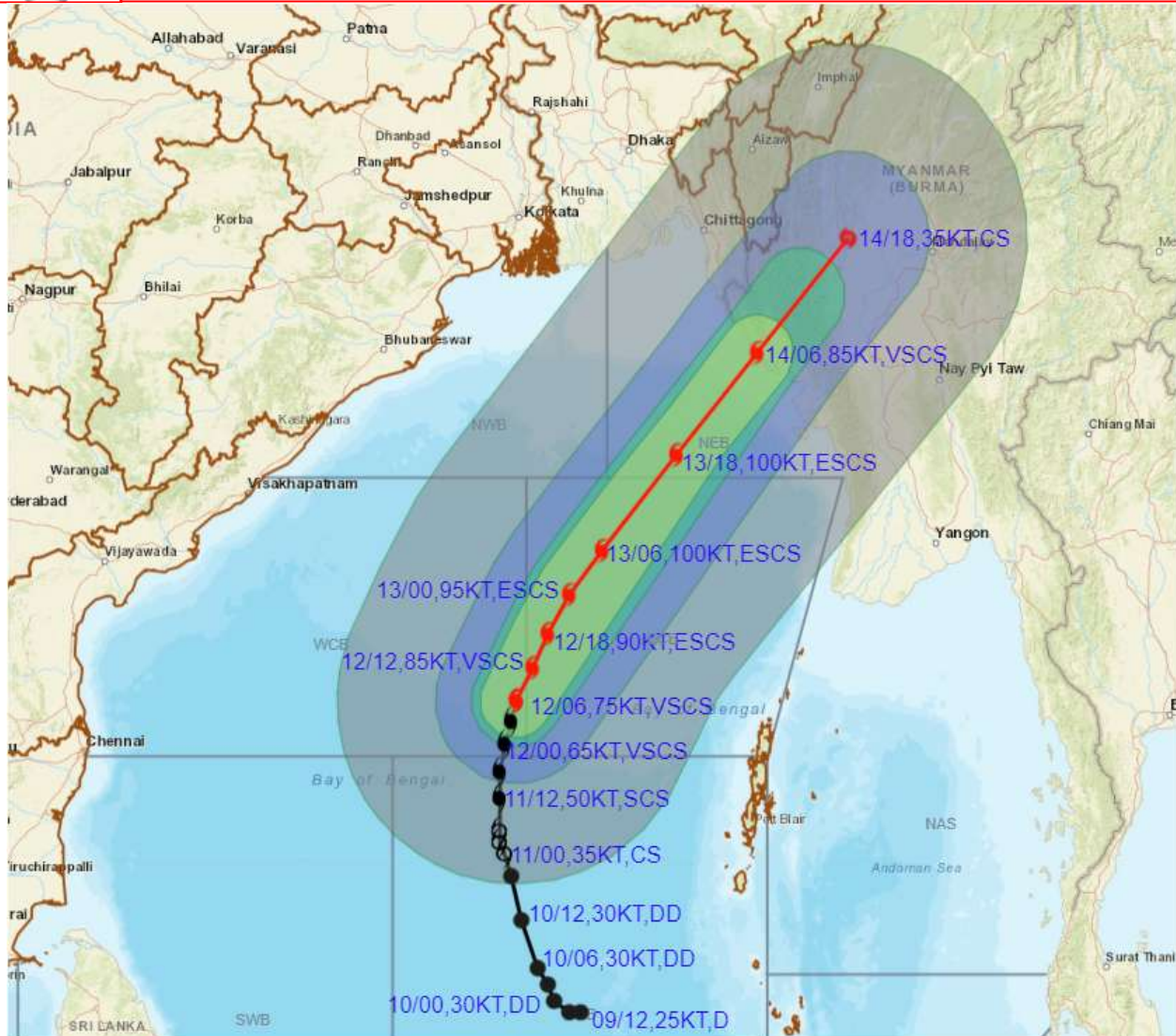
- LESS THAN 34 KT
- 34-47 KT
- $\geq 48$  KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

**Forecast distance (km) and direction of the centre from nearest 5 coastal stations**

Forecast Date and Time	Lead Period	Lat	Lon	Station 1	Station 2	Station 3	Station 4	Station 5
12.05.23/0600	0	14.0	88.3	MAYA BANDAR (514,WNW)	LONG ISLAND (532,WNW)	PORT BLAIR (545,WNW)	COCO ISLAND (547,W)	HUT BAY (599,NW)
13.05.23/0600	24	16.7	89.9	COCO ISLAND (470,NW)	MANAUNG (472,WSW)	KYAUKPYU (491,SW)	SANDHEADS (494,SSE)	SITTWE (495,SW)
14.05.23/0600	48	20.2	92.8	SITTWE (11,NW)	KYAUKTAW (74,SSE)	TEKNAF (91,SE)	KYAUKPYU (117,NW)	COX'S BAZAR (164,SSE)



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF VERY SEVERE CYCLONIC STORM MOCHA OVER CENTRAL BAY OF BENGAL BASED ON 0600 UTC (1130 IST) OF 12<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)

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)

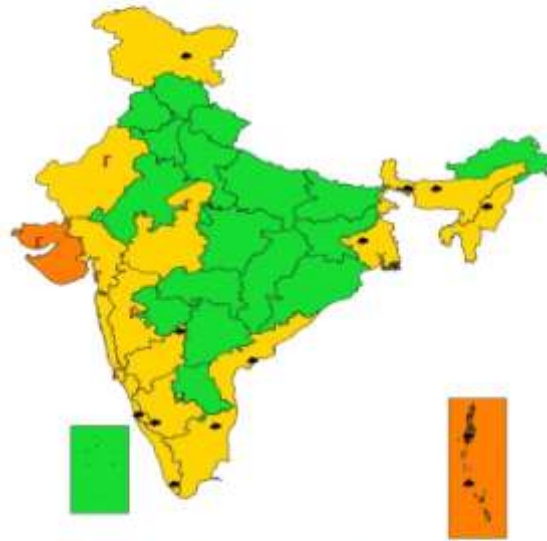
≥ 64 (≥118 KMPH)

**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  
( 12-5-2023 )**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <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)    |
| ☁ Hailstone                 | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
( 13-5-2023 )**



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <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)    |
| ☁ Hailstone                 | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |



**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
( 14-5-2023 )**

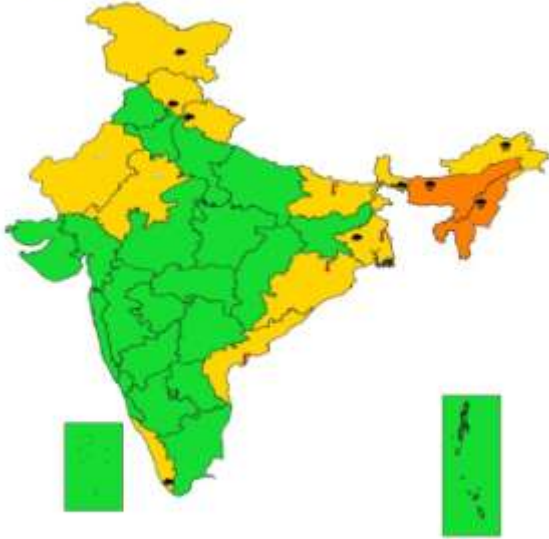


- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <b>Subdivision Warning</b>  | <b>Dust Storm</b>      | <b>Subdivision color</b> |
| ☁ Heavy Rain                | 🌪 Strong Surface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





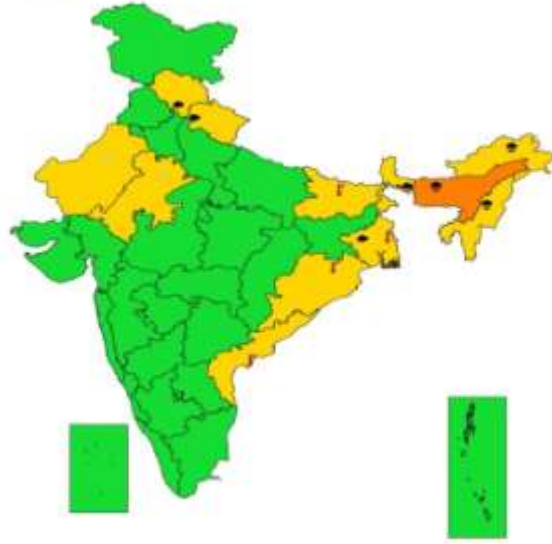
### SUBDIVISIONWISE WEATHER WARNING FOR DAY 4 ( 15-5-2023)



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <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)    |
| 🌫 Haze/fog                  | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |



### SUBDIVISIONWISE WEATHER WARNING FOR DAY 5 ( 16-5-2023)



- |                             |                        |                          |
|-----------------------------|------------------------|--------------------------|
| <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)    |
| 🌫 Haze/fog                  | 🌫 Fog                  | 🔴 WARNING (TAKE ACTION)  |

## Fishermen warning graphics

