



India Meteorological Department
(Ministry of Earth Sciences)

BULLETIN NO. 9 (BoB/02/2023)

TIME OF ISSUE: 1145 HOURS IST DATED: 11.05.2023
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)
CHIEF SECRETARY, GOVT. OF TRIPURA (FAX NO. 0381-2414013, 2413200)
CHIEF SECRETARY, GOVT. OF MIZORAM (FAX NO. 0389-2322745, 2320588)
CHIEF SECRETARY, GOVT. OF ASSAM (FAX NO. 0361-2260900)
CHIEF SECRETARY, GOVT. OF MANIPUR (FAX NO. 0385-2452629)
CHIEF SECRETARY, GOVT. OF NAGALAND (FAX NO. 0370-2270057)

Sub: Cyclonic storm "Mocha" pronounced as "Mokha" over southeast Bay of Bengal

The cyclonic storm "**Mocha**" pronounced as "**Mokha**" over southeast Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 06 hours, and lay centered at 0830 hours IST of 11th May 2023 over the same region near latitude 11.4°N and longitude 88.0°E, about 510 km west-southwest of Port Blair, 1190 km south-southwest of Cox's Bazar (Bangladesh) and 1100 km south-southwest of Sittwe (Myanmar).

It is very likely to move north-northwestwards and gradually intensify into a severe cyclonic storm around night of today, the 11th May. Thereafter, it is likely to recurve gradually, move north-northeastwards from 12th May morning and intensify further into a very severe cyclonic storm around 12th May evening over central Bay of Bengal. It would reach its peak intensity around 13th May evening. 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 with maximum sustained wind speed of 140-150 kmph gusting to 165 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
11.05.23/0830	11.4/88.0	65-75 gusting to 85	Cyclonic Storm
11.05.23/1130	11.7/88.0	70-80 gusting to 90	Cyclonic Storm
11.05.23/1730	12.2/87.9	80-90 gusting to 100	Cyclonic Storm
11.05.23/2330	12.7/87.9	90-100 gusting to 110	Severe Cyclonic Storm
12.05.23/0530	13.2/88.0	110-120 gusting to 130	Severe Cyclonic Storm
12.05.23/1730	14.3/88.5	120-130 gusting to 145	Very Severe Cyclonic Storm
13.05.23/0530	15.9/89.4	130-140 gusting to 155	Very Severe Cyclonic Storm
13.05.23/1730	17.5/90.6	140-150 gusting to 165	Very Severe Cyclonic Storm
14.05.23/0530	19.4/92.2	140-150 gusting to 165	Very Severe Cyclonic Storm
14.05.23/1730	22.0/94.4	75-85 gusting to 95	Cyclonic Storm

Warnings:

(i) Rainfall (warning graphics enclosed)

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

(ii) Wind warning:

- ❖ **Andaman & Nicobar Islands:**
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail on 11th May.
- ❖ **Tripura, Mizoram & south Manipur:**
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is very likely to prevail on 14th May.
- ❖ **Andaman Sea:**
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail over North Andaman Sea till 12th May.
- ❖ **Southeast Bay of Bengal:**
Gale wind speed reaching 65-75 kmph gusting to 85 kmph is prevailing and likely to become 80-90 kmph gusting to 100 kmph from 11th May night.
Gale wind speed reaching 100-110 kmph gusting to 120 kmph is likely by 12th May morning to evening and decrease thereafter becoming squally wind speed reaching 55-65 kmph gusting to 75 kmph on 13th May.
- ❖ **Adjoining areas of southwest Bay of Bengal:**
Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely on 11th May.
- ❖ **Eastcentral Bay of Bengal:**
Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing and likely to become gale wind speed reaching 80-90 kmph gusting to 100 kmph by 11th May evening;
Gale wind speed reaching 110-120 kmph gusting to 135 kmph is likely on 12th May early morning, 130-140 kmph gusting to 155 kmph from 13th May morning and 140-150 kmph

gusting to 165 kmph from 13th May evening till 14th May morning and gradually decrease thereafter.

❖ **Westcentral Bay of Bengal:**

Squally weather with wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing and gradually increase becoming gale wind speed reaching 60-70 kmph gusting to 80 kmph from 11th May afternoon;

Gale wind speed reaching 110-120 kmph gusting to 130 kmph is likely on 12th May morning and 120-130 gusting to 145 kmph on 12th May evening and decrease thereafter from 13th May morning.

Gale wind speed reaching 100-110 kmph gusting to 120 kmph is likely on 13th May evening and significantly decrease thereafter.

❖ **Northeast Bay of Bengal:**

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely on 12th May.

Gale wind speed reaching 80-90 kmph gusting to 100 kmph is likely to commence from 13th May morning and gradually increase and becoming 140-150 kmph gusting 165 kmph from 13th evening. Subsequently, it is likely to decrease gradually from 14th May noon after the land fall.

❖ **Adjoining areas of Northwest Bay of Bengal:**

Squally wind speed reaching 55-65 kmph gusting to 75 kmph is likely on 13th May and 14th May forenoon and decrease gradually thereafter.

(iii) Sea condition

❖ **Andaman Sea:**

Very rough over Andaman Sea on 11th May.

Very rough to rough over north Andaman Sea during 12th & 13th May.

❖ **Southeast Bay of Bengal:**

Very rough to high is likely to prevail till 11th May.

High to very high on 12th May.

Very rough to rough on 13th May.

❖ **Eastcentral Bay of Bengal:**

High sea condition is prevailing and likely to become very high from 11th midnight and phenomenal from 12th May to 14th May morning. 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 11th midnight and phenomenal from 12th May morning to 13th May morning. It will gradually improve thereafter.

❖ **Northeast Bay of Bengal:**

Rough to very rough on 12th May.

Phenomenal during 13th & 14th May.

❖ **Adjoining areas of Northwest Bay of Bengal:**

Rough to very rough during 13th & 14th 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 11th May, central Bay of Bengal and north Andaman Sea till 14th May, and into northeast Bay of Bengal during 12th-14th 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)

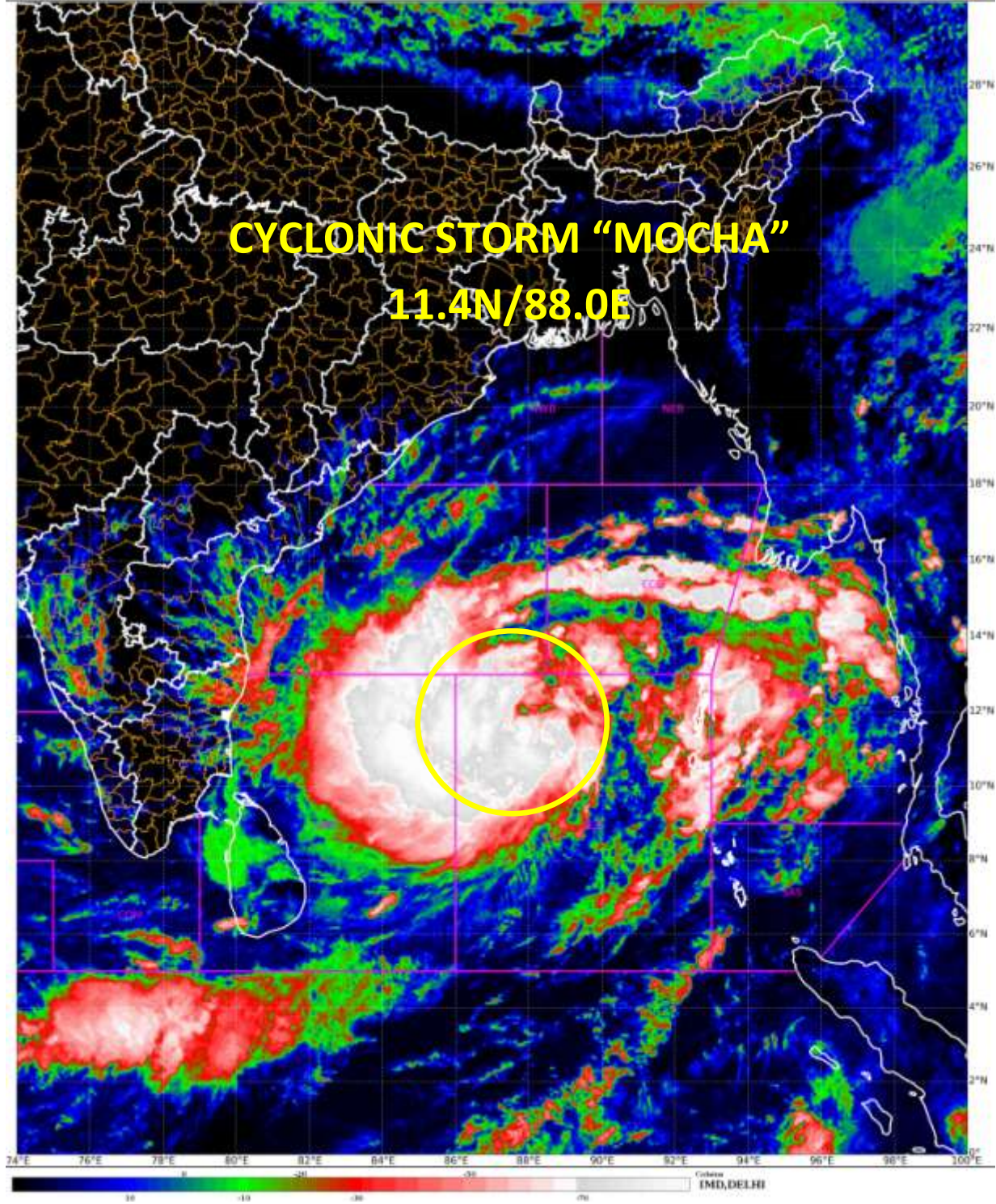
- ❖ Very rough to phenomenal sea could effect marine operation and offshore activities.
- ❖ Regulation of tourism and offshore activities and shipping near Andaman & Nicobar Islands till 13th May.
- ❖ Regulation of shipping activity over the sea areas of southeast Bay of Bengal and Andaman Sea till 12th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

The system is under continuous surveillance and the next message will be issued at 1430 hours IST of today, the 11th May 2023.

(Dr. Ananda Kumar Das)

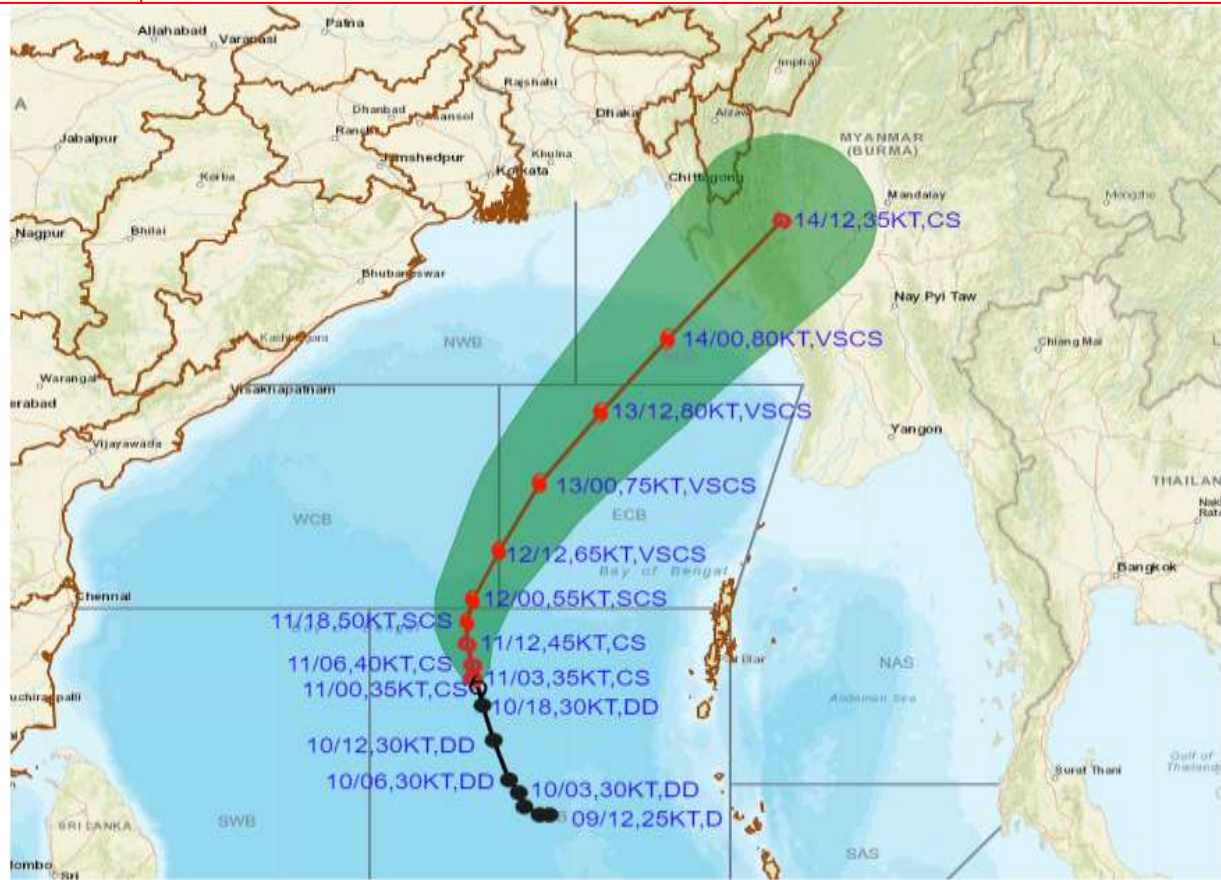
Scientist F, Cyclone Warning Division, New Delhi

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





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 11TH 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

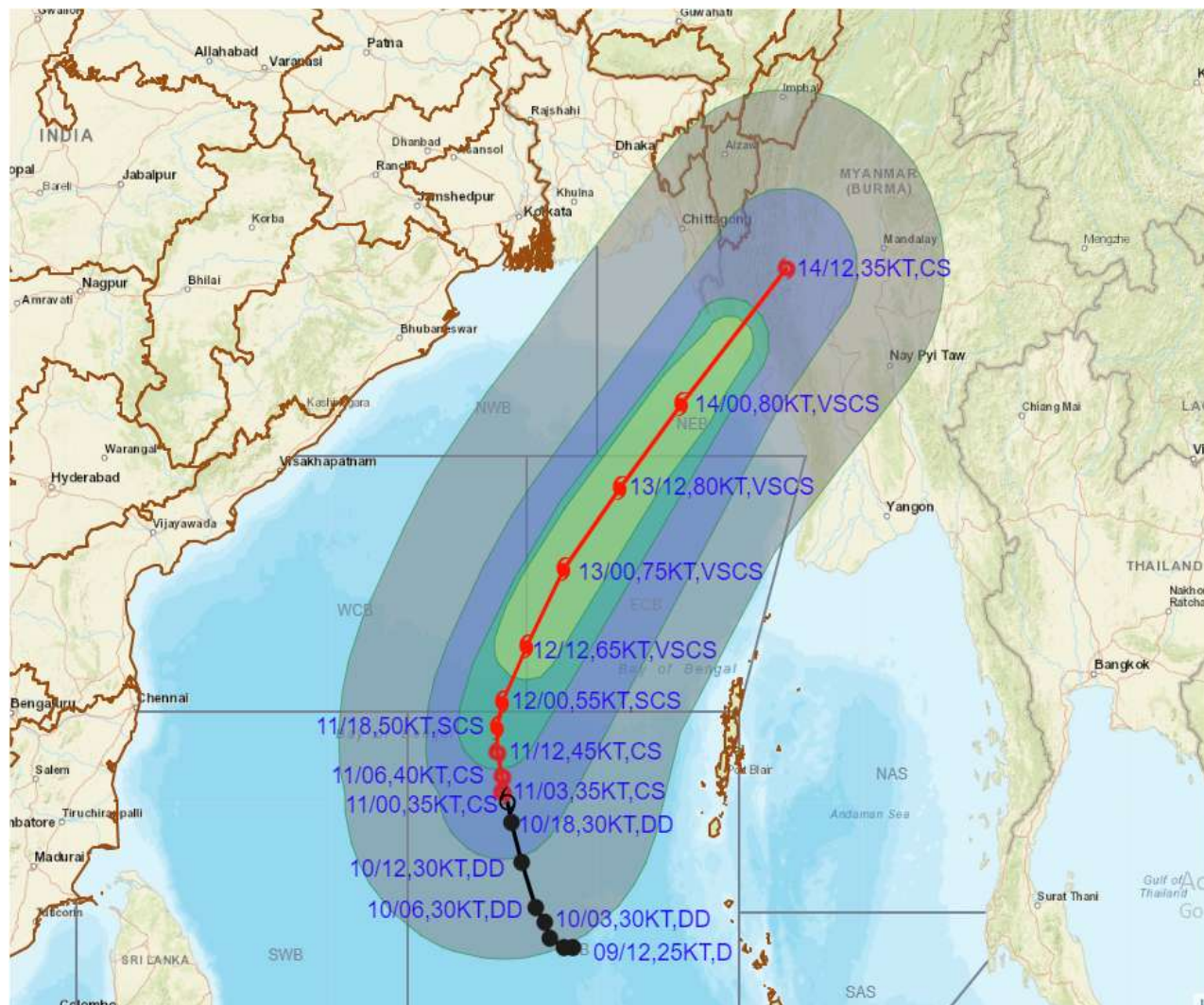
▲ CONE OF UNCERTAINTY

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
11.05.23/0300	0	11.4	88.0	HUT BAY (505,W)	PORT BLAIR (515,W)	LONG ISLAND (549,WSW)	MAYA BANDAR (561,WSW)	CAR NICOBAR (585,WNW)
12.05.23/0000	21	13.2	88.0	MAYA BANDAR (534,W)	PORT BLAIR (540,WNW)	LONG ISLAND (543,W)	HUT BAY (575,WNW)	COCO ISLAND (589,W)
13.05.23/0000	45	15.8	89.3	COCO ISLAND (476,WNW)	MAYA BANDAR (505,NW)	LONG ISLAND (544,NW)	PARADIP (CWR) (572,SSE)	SANDHEADS (573,SSE)
14.05.23/0000	69	19	91.8	SITTWE (170,SW)	KYAUKPYU (190,WSW)	MANAUNG (204,W)	TEKNAF (214,SSW)	KYAUKTAW (224,SSW)



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONE MOCHA OVER SOUTHEAST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 11TH 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)

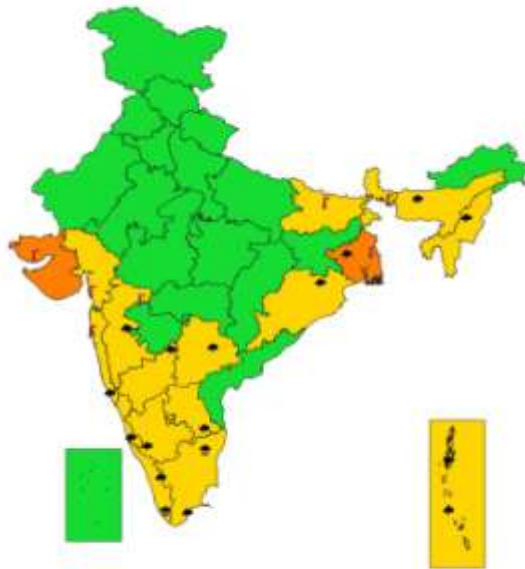
■ ≥ 64 KT (≥118 KMPH)

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



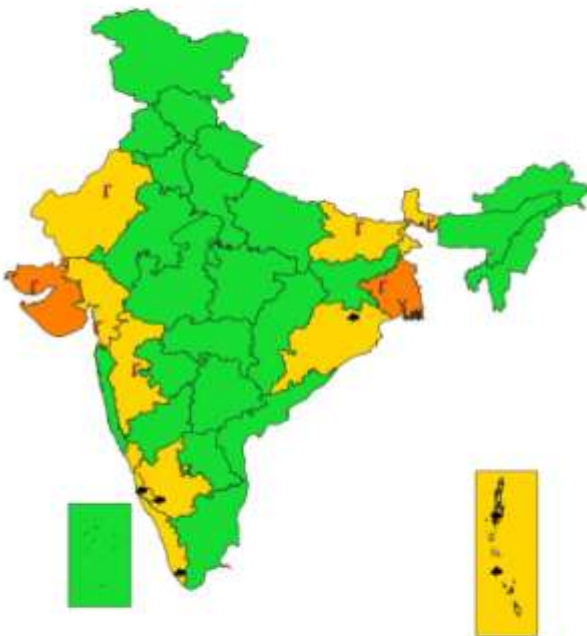
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
(11-5-2023)**



- | | | |
|--|---|---|
| <ul style="list-style-type: none"> ● Heavy Rain ⚡ Thunderstorms & Lightning ⚡ Hailstorm | <ul style="list-style-type: none"> ☁ Dust Storm 🌪 Strong Surface Winds 🔥 Heat Wave ❄ Cold wave 🌫 Fog | <p>Subdivision color</p> <ul style="list-style-type: none"> 🟢 NO WARNING 🟡 WATCH (BE UPDATED) 🟠 ALERT (BE PREPARED) 🔴 WARNING (TAKE ACTION) |
|--|---|---|



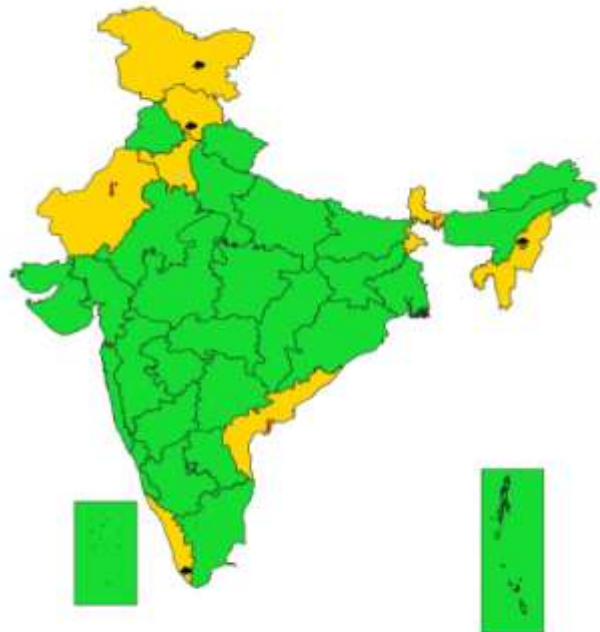
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
(12-5-2023)**



- | | | |
|--|---|---|
| <ul style="list-style-type: none"> ● Heavy Rain ⚡ Thunderstorms & Lightning ⚡ Hailstorm | <ul style="list-style-type: none"> ☁ Dust Storm 🌪 Strong Surface Winds 🔥 Heat Wave ❄ Cold wave 🌫 Fog | <p>Subdivision color</p> <ul style="list-style-type: none"> 🟢 NO WARNING 🟡 WATCH (BE UPDATED) 🟠 ALERT (BE PREPARED) 🔴 WARNING (TAKE ACTION) |
|--|---|---|



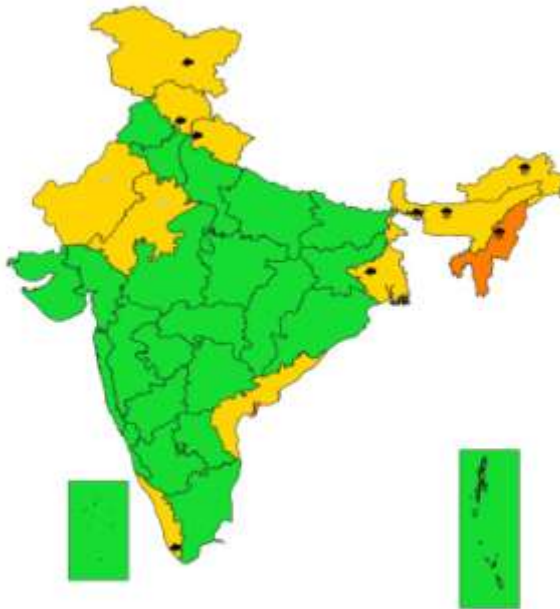
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(13-5-2023)**



- | | | |
|--|---|---|
| <ul style="list-style-type: none"> ● Heavy Rain ⚡ Thunderstorms & Lightning ⚡ Hailstorm | <ul style="list-style-type: none"> ☁ Dust Storm 🌪 Strong Surface Winds 🔥 Heat Wave ❄ Cold wave 🌫 Fog | <p>Subdivision color</p> <ul style="list-style-type: none"> 🟢 NO WARNING 🟡 WATCH (BE UPDATED) 🟠 ALERT (BE PREPARED) 🔴 WARNING (TAKE ACTION) |
|--|---|---|



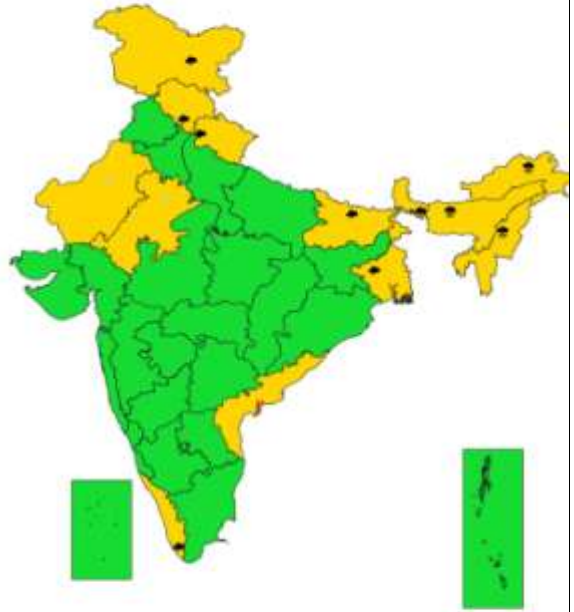
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4
(14-5-2023)**



- | | | |
|-----------------------------|-------------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| ☁️ Heavy Rain | 🌪️ 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 5
(15-5-2023)**



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

Fishermen warning graphics

