



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

Press Release

Date: 13th May, 2023

Time of Issue: 1345 hours IST

Subject: (i) A fresh heat wave spell commenced over Northwest India since yesterday and likely to continue till today.

(ii) Another fresh spell of heat wave is expected over Central India during next two days and over East India (Gangetic West Bengal & Odisha) from 15th May.

(iii) A fresh spell of heavy to very heavy rainfall over northeastern states in association with the Extremely Severe Cyclonic storm “Mocha” (pronounced as “Mokha”) over Central & adjoining Southeast Bay of Bengal during 13th-14th May.

Weather observed during past 24 hours ending at 0830 hrs IST of today: (Refer Annexure I)

Significant Meteorological features:

❖ Yesterday's **Very Severe cyclonic storm “Mocha” pronounced as “Mokha” over Central and adjoining Southeast Bay of Bengal** has intensified into an **Extremely Severe Cyclonic Storm** at 2330 hrs IST of 12th May over Eastcentral Bay of Bengal. It moved nearly northeastwards with a speed of 14 kmph during past 06 hours and lay centered at 0830 hours IST of today, the 13th May 2023 over Eastcentral Bay of Bengal near latitude 15.7°N and longitude 89.5°E, about 560 km north-northwest of Port Blair, 680 km south-southwest of Cox's Bazar (Bangladesh) and 600 km southwest of Sittwe (Myanmar).

❖ It is very likely to move north-northeastwards and 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 and warning in association with Extremely Severe Cyclonic Storm “Mocha” (pronounced as “Mokha”) over Eastcentral Bay of Bengal:

Warnings:

(i) Rainfall (warning graphics enclosed)

❖ **Andaman & Nicobar Islands:** Light to moderate Rainfall at most places are likely on 13th 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:

- ❖ **Tripura, Mizoram & south Manipur:**
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is very likely to prevail on 14th May.
- ❖ **North Andaman Sea:**
Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail till 14th May forenoon.
- ❖ **Southeast Bay of Bengal:**
Gale wind speed reaching 115-125 kmph gusting to 145 kmph is prevailing and likely to continue till early morning of 13th May and decrease thereafter becoming squally wind speed reaching 55-65 kmph gusting to 75 kmph till 13th May evening.
- ❖ **Adjoining areas of southwest Bay of Bengal:**
Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail till 13th May morning.
- ❖ **Eastcentral Bay of Bengal:**
Gale wind speed reaching 180-190 kmph gusting to 210 kmph is prevailing over the region. It is very likely to increase becoming 190-200 kmph gusting to 220 kmph till 13th May night and gradually decrease thereafter.
- ❖ **Westcentral Bay of Bengal:**
Gale wind speed reaching 150-160 kmph gusting to 175 kmph is prevailing over the region and would continue over southeastern sector of the region till 13th May evening. It will decrease gradually becoming 90-100 kmph gusting to 110 kmph by 14th May morning and significantly decrease thereafter.
- ❖ **Northeast Bay of Bengal:**
Gale wind speed reaching 80-90 kmph gusting to 100 kmph is prevailing and it would gradually increase becoming 190-200 kmph gusting 220 kmph from 13th evening till 14th May morning. It is likely to decrease thereafter to 150-160 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 13th May to 14th May forenoon and decrease gradually thereafter.

(iii) Sea condition

- ❖ **Andaman Sea:**
Very rough to rough over north Andaman Sea on 13th May.
- ❖ **Southeast Bay of Bengal:**
Very rough to rough on 13th May.
- ❖ **Eastcentral Bay of Bengal:**
Phenomenal sea condition is prevailing and would continue till 14th May morning. It will improve gradually thereafter.

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

Phenomenal sea condition is prevailing and would continue till 13th May evening. It will gradually improve thereafter.

❖ **Northeast Bay of Bengal:**

Very rough to high is likely till 13th May evening and very high to phenomenal till 14th May afternoon.

❖ **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 till 13th May, central Bay of Bengal and north Andaman Sea till 14th May and into northeast Bay of Bengal during 13th-14th 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 13th May.
- ❖ Regulation of shipping activity over the sea areas of southeast Bay of Bengal and Andaman Sea till 13th 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 13th-14th May.

Forecast and warning over rest parts of the country during next 5 days:

Northeast India:

- ❖ Light/moderate fairly widespread to widespread rainfall very likely over Northeast India during 13th-16th May.
- ❖ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh on 14th & 15th; over Assam & Meghalaya during 14th-17th and over Nagaland, Manipur, Mizoram & Tripura during 13th-17th May.
- ❖ Isolated **very heavy falls** also likely over Assam & Meghalaya on 15th & 16th and over Nagaland, Manipur, Mizoram & Tripura during 14th-16th May.

No significant weather likely over rest parts of the country.

Observed Maximum Temperatures and Heat Wave conditions:

- ❖ Yesterday, Maximum Temperatures were in the range of 44-46°C over most parts of West Rajasthan; in the range of 40-42°C over most parts of Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh, East Rajasthan, Vidarbha and Marathawada; many parts of East Uttar Pradesh, Gujarat state, Jharkhand and Telangana; some parts of Chhattisgarh, Madhya Maharashtra and Andhra Pradesh; isolated parts of West Uttar Pradesh, Gangetic West Bengal and Odisha and below 40°C over remaining parts of the country.
- ❖ Maximum Temperatures were above normal by 4-6°C over parts of Gujarat state.
- ❖ Yesterday, **Heat wave conditions** prevailed in some pockets over West Rajasthan and in isolated pockets over Saurashtra & Kutch.

Maximum Temperatures Forecast and Heat Wave Warnings (Graphics in Annexure II):

- ❖ A fresh heat wave spell commenced over Northwest India since yesterday. West Rajasthan experienced heat wave conditions with maximum temperatures >45°C. It is expected that this heat wave conditions will be temporary. It will prevail today over Rajasthan, Haryana, Delhi, southwest Uttar Pradesh today and over West Madhya Pradesh and Vidarbha upto tomorrow with departures of maximum temperatures > 5-6°C above normal.
- ❖ Another fresh spell of heat wave is expected over East India, especially over Gangetic West Bengal during 15th & 16th and over Coastal Andhra Pradesh and Odisha during 15th -17th May.
- ❖ Maximum temperatures are very likely to rise by 2-4°C over parts of peninsular India during next 5 days and by about 2°C over Northwest India during next 24 hours and no significant change over the rest parts of the country during next 24 hours.
- ❖ Due to humid air and high temperature, Hot and Discomfort weather is very likely over Konkan and Gujarat coast today.

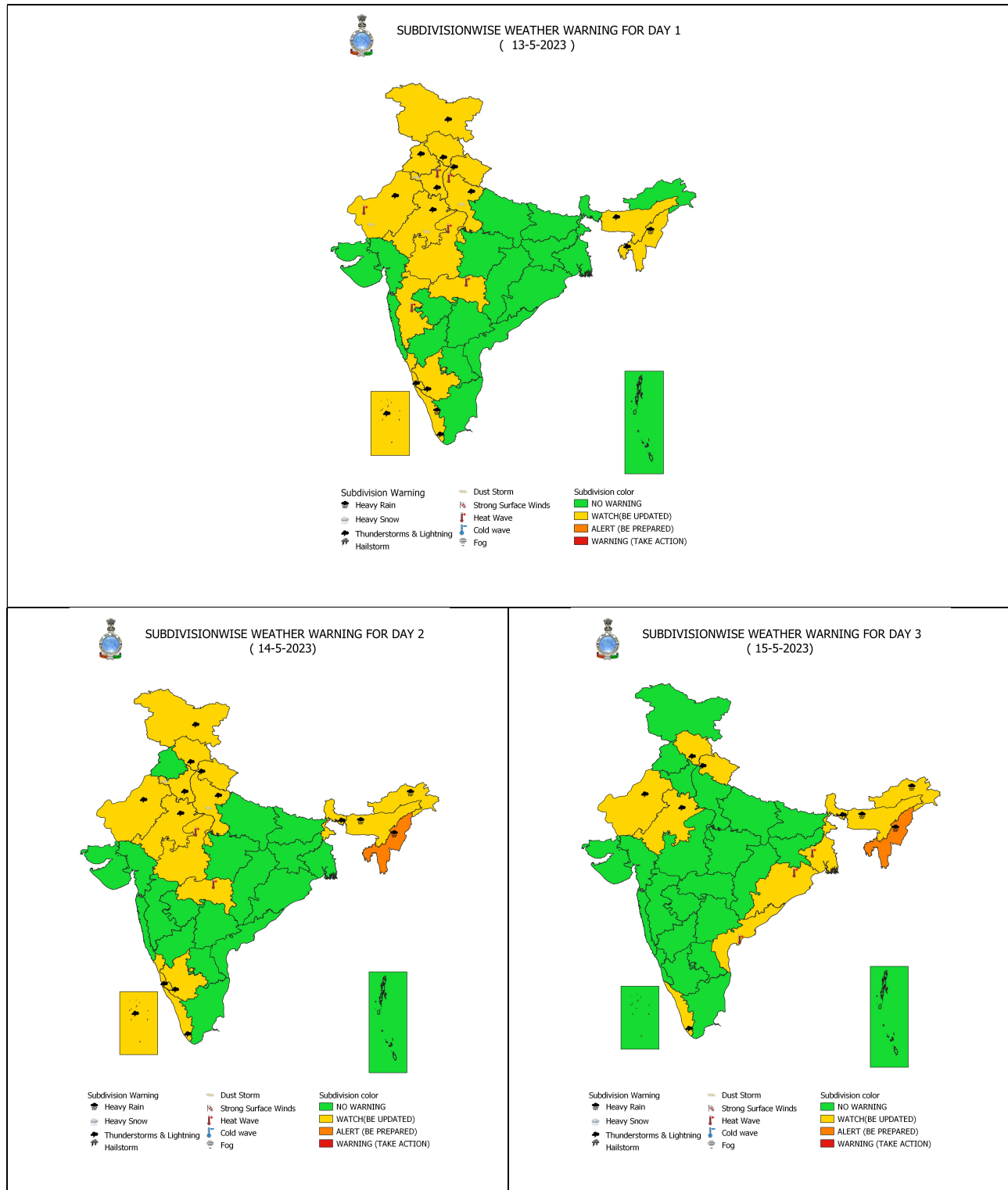
For more details kindly refer:

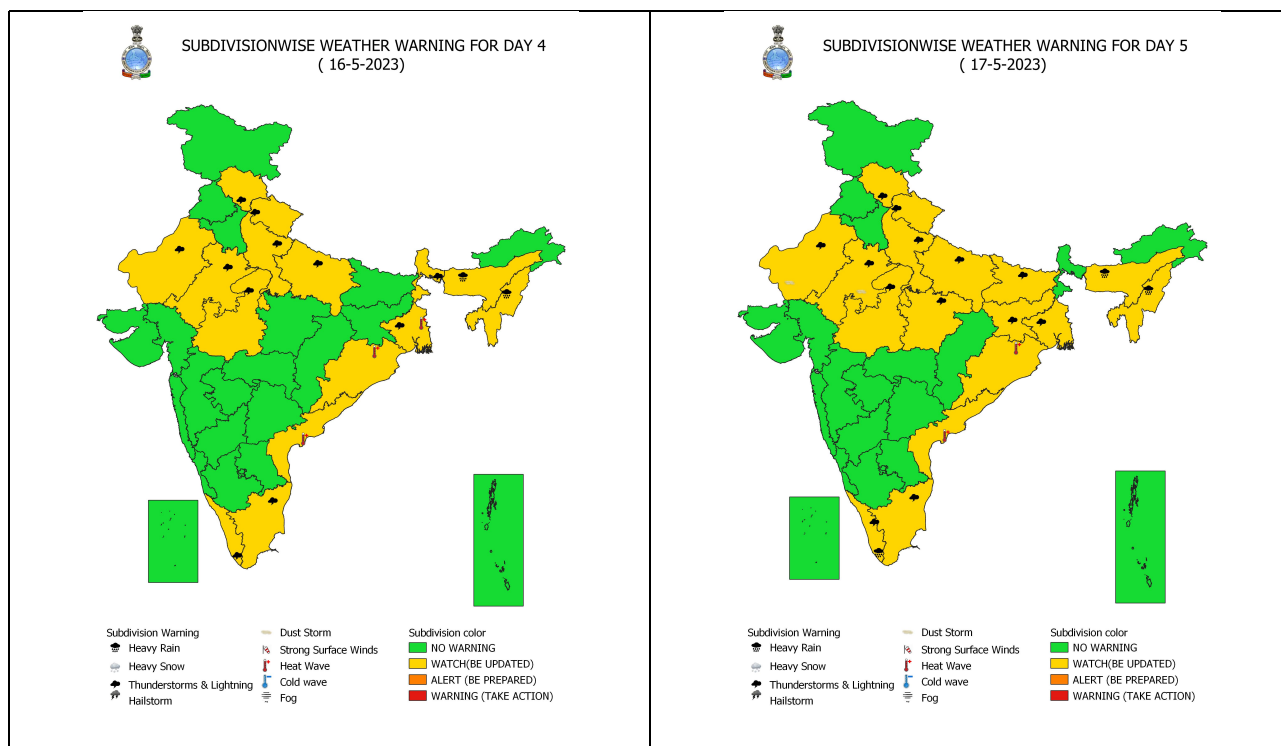
https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

<https://mausam.imd.gov.in/responsive/districtWiseNowcast.php>

Observations: (from 0830 hours IST of yesterday to 0830 hours IST of today):

- **Rainfall/thundershowers observed at many places** over Andaman & Nicobar Islands; **at a few places** over Kerala & Mahe, Coastal & North Interior Karnataka and Lakshadweep; **at isolated places** over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal and South Interior Karnataka.
- **Heavy Rainfall occurred** at isolated places over Andaman Islands and South Interior Karnataka.
- **Significant rainfall recorded** (in cm): **Andaman Islands:** Long Island (dist north Andaman) 8; **South Interior Karnataka:** Honnali (dist Davangere) 7; **Tamil Nadu:** Mullanginavillai (dist Kanyakumari) 6, Kurunthancode (dist Kanyakumari), Thuckalay (dist Kanyakumari) 5 each, Mambzhathuraiyaru (dist Kanyakumari) 4, Anaikedanku (dist Kanyakumari), Nagercoil (dist Kanyakumari), Kozhiporvilai (dist Kanyakumari) 3 each; **Nagaland, Manipur, Mizoram & Tripura:** Saiha (dist Saiha) 5, Lawngtlai (dist Lawngtlai) 4, Saiha_Aws (dist Saiha) 4; **North Interior Karnataka:** Savanur (dist Haveri) 5, Annigere Ars (dist Dharwad) 4, Lakshmeswar (dist Gadag) 3; **Kerala:** Varkala (Thiruvananthapuram district) 4, Thiruvananthapuram, Thalassery (Kannur district) & Vellayani AWS (Thiruvananthapuram district) 3 each.





IMPACT & ACTION SUGGESTED due to Heat Wave:

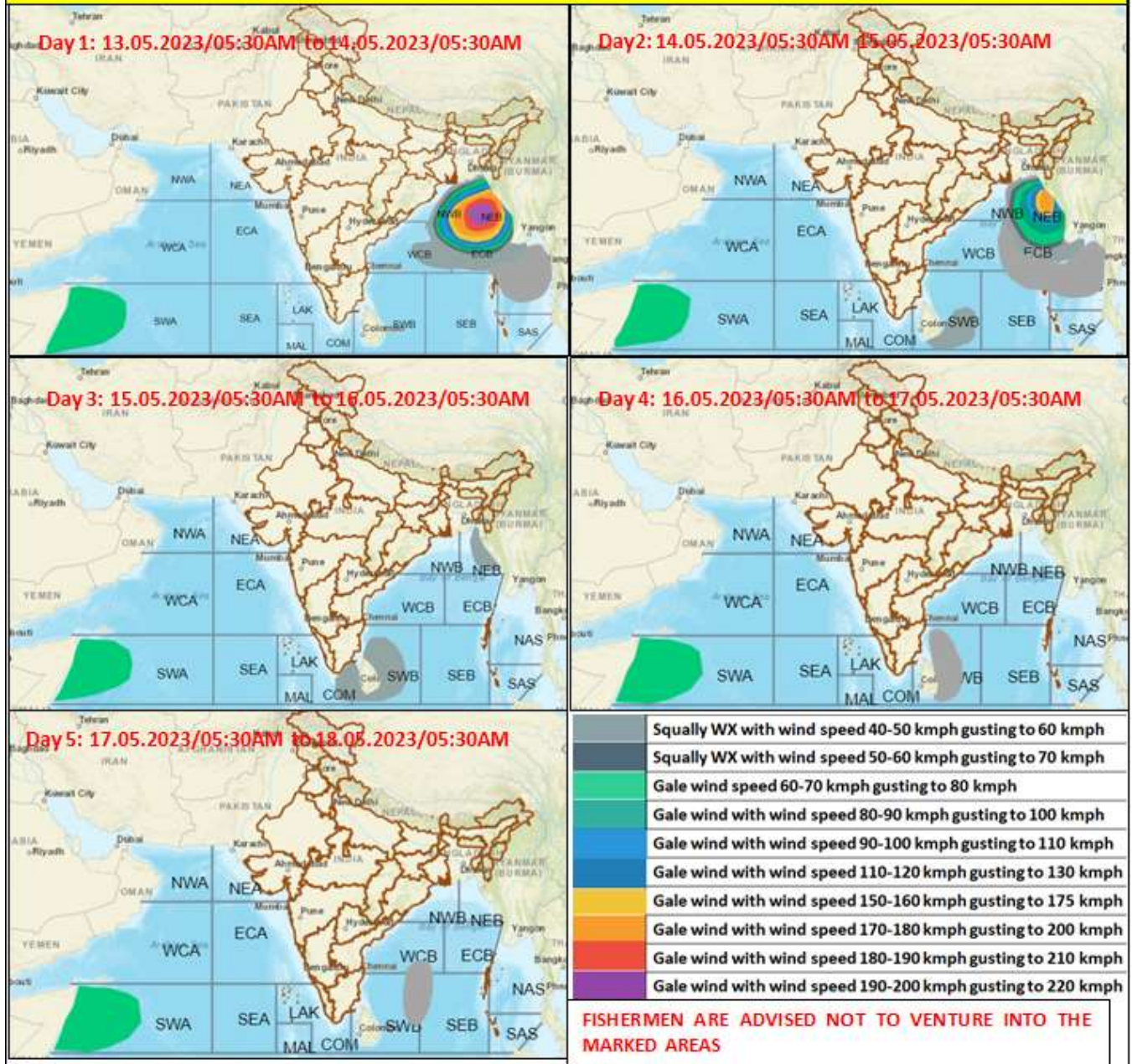
❖ Yellow alert Areas:

- (1) Moderate temperature, Heat is tolerable for general public but moderate health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- (2) Avoid heat exposure, Wear lightweight, light coloured, loose, cotton clothes, Cover your head, use a cloth, hat or umbrella.

❖ Orange alert Areas:

- (1) High temperature, Increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work. High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- (2) Drink sufficient water- even if not thirsty, Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

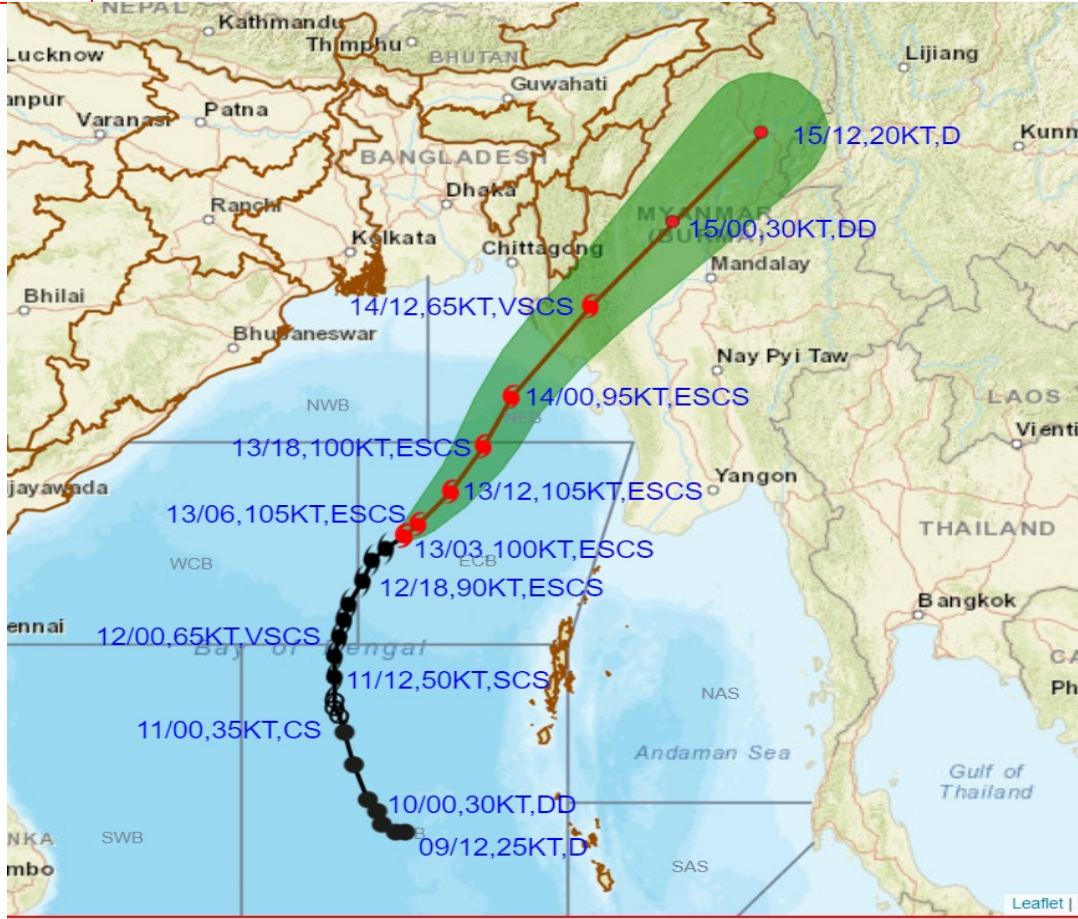
Fishermen warning graphics







OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 13TH 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

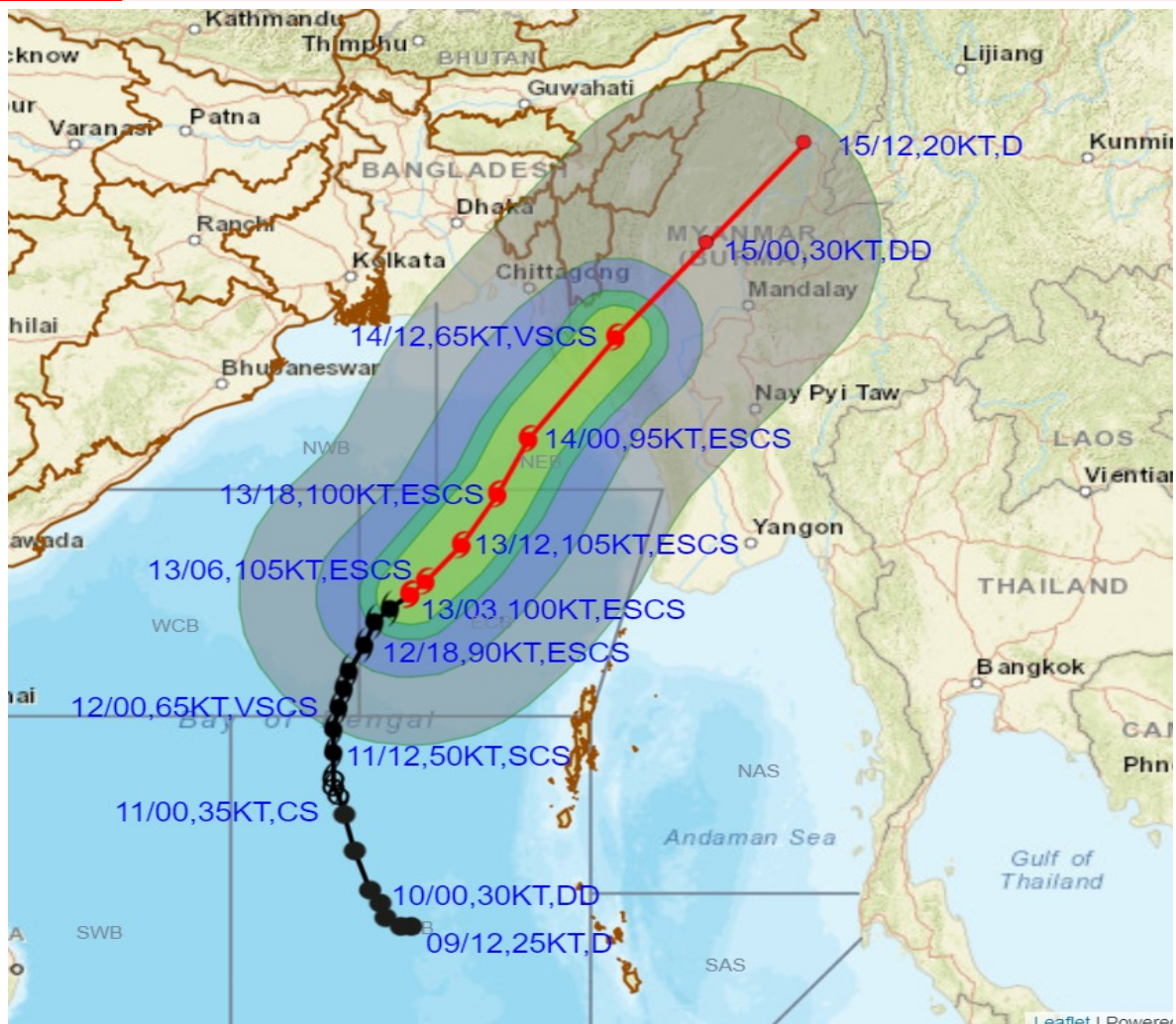
▲ CONE OF UNCERTAINTY

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
13.05.23/0300	0	15.7	89.5	COCO ISLAND (452,WNW)	MAYA BANDAR (481,NW)	LONG ISLAND (521,NW)	PORT BLAIR (568,NW)	MANAUNG (570,SW)
14.05.23/0000	21	19.1	91.8	SITTWE (162,SW)	KYAUKPYU (187,W)	TEKNAF (204,SSW)	MANAUNG (205,W)	KYAUKTAW (213,SSW)
15.05.23/0000	45	23.3	95.3	PINLEBU (87,S)	SHWEBO (90,NNW)	MAWLAIK (98,ESE)	KALEWA (103,E)	KALEMYO (127,E)



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF EXTREMELY SEVERE CYCLONIC STORM MOCHA OVER EASTCENTRAL BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 13TH 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 (48-63 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 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

Legends:

❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.

❖ **Region wise classification of meteorological Sub-Divisions:**

- **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
- **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- **East India:** Bihar, Jharkhand, Sub-Himalaya West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
- **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Lakshadweep.

SPATIAL DISTRIBUTION (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

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)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75