



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

Press Release

Date: 11th May, 2023

Time of Issue: 1300 hours IST

Subject: (i) Cyclonic Storm “Mocha” pronounced as “Mokha” over southeast Bay of Bengal.

(ii) Heat wave conditions over West Bengal, Bihar, Gujarat and Maharashtra on 11th & 12th May.

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

Significant Meteorological features:

- ❖ Yesterday's Deep Depression over southeast Bay of Bengal intensified into a **cyclonic storm “Mocha” pronounced as “Mokha”** over the same region at 0530 hrs IST of 11th May. It 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.
- ❖ A trough runs from cyclonic circulation associated with the Deep Depression over Southeast Bay of Bengal to south Andhra Pradesh coast in lower & middle tropospheric levels.

Forecast and warning in association with Cyclonic Storm “Mocha” over Southeast Bay of Bengal:

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.

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

South India:

- ❖ Thunderstorm/lightning/gusty winds with light/moderate scattered to fairly widespread rainfall very likely over Kerala & Mahe during next 5 days; over South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal on 11th & 12th May and with light isolated to scattered rainfall over rest parts of the region on 11th May.
- ❖ **Heavy rainfall** very likely at isolated places over Tamil Nadu and Kerala on 11th May.

No significant weather likely over rest parts of the country.

Maximum Temperatures, its forecast and Heat Wave Warnings (Graphics in Annexure II):

- ❖ Yesterday, Maximum Temperatures were below 40°C over many parts of the country except over parts of East India, Rajasthan, East Uttar Pradesh, Madhya Pradesh, interior Maharashtra & Gujarat; where these

were between 40-44°C. Maximum Temperatures were above normal by 4-6°C over parts of Saurashtra & Kutch, Bihar, West Bengal and northeast India.

- ❖ Maximum temperatures are very likely to rise by 3-5°C over most parts of the country during next 3 days except over East India where no significant change in maximum temperatures is likely.
- ❖ Due to humid air and high temperature, **Hot and Discomfort weather** is very likely over Konkan during next 3 days; over Odisha during next 5 days; Kerala and Tamil Nadu on 13th & 14th May.
- ❖ **Heat wave conditions** very likely in isolated pockets over Gujarat state, Madhya Maharashtra, Bihar and West Bengal on 10th & 11th May; over Konkan on 11th; over during 10th-12th May; over Rajasthan on 12th & 13th and over Coastal Andhra Pradesh & Yanam during 13th-15th May.

For more details kindly refer:

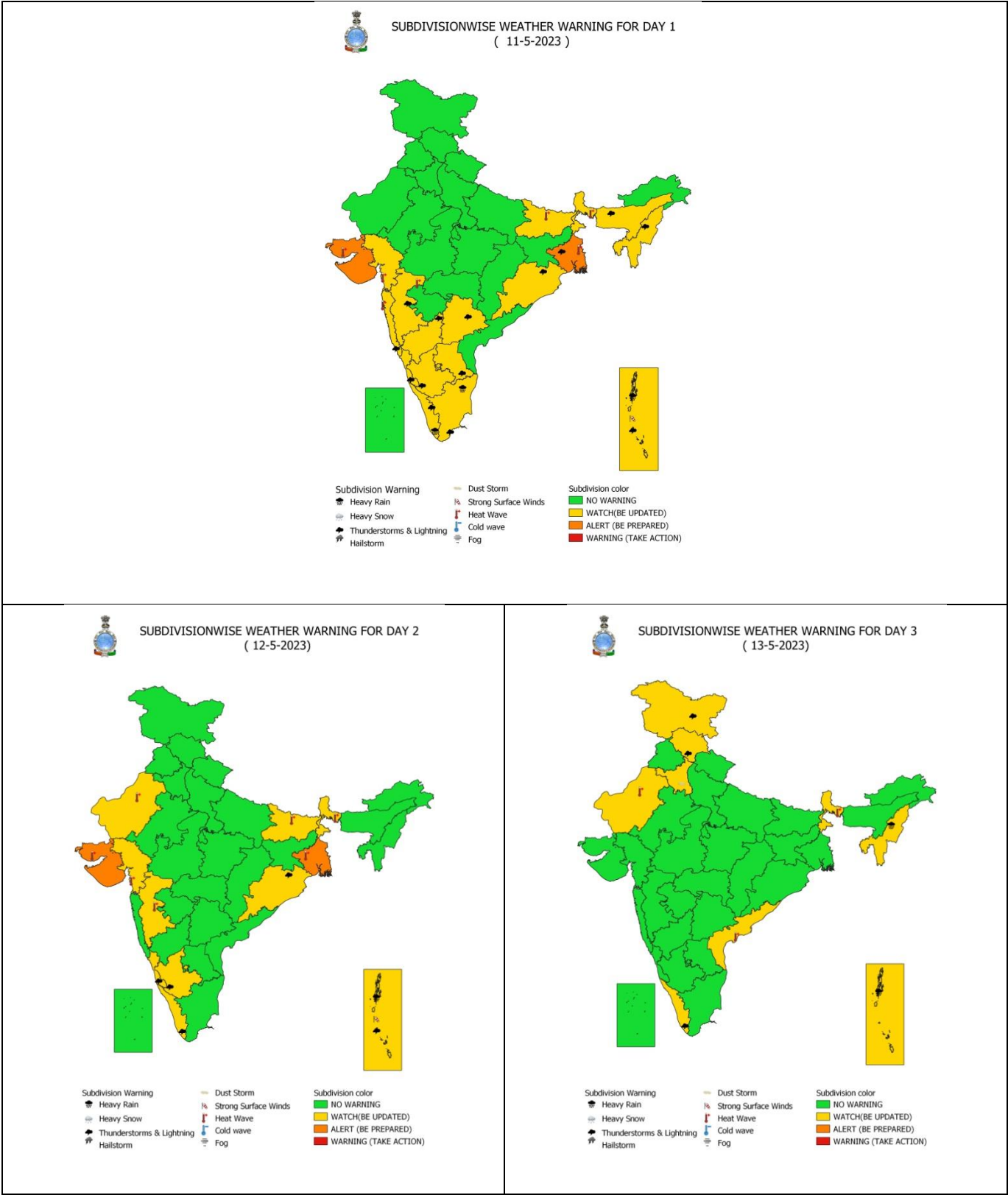
https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php

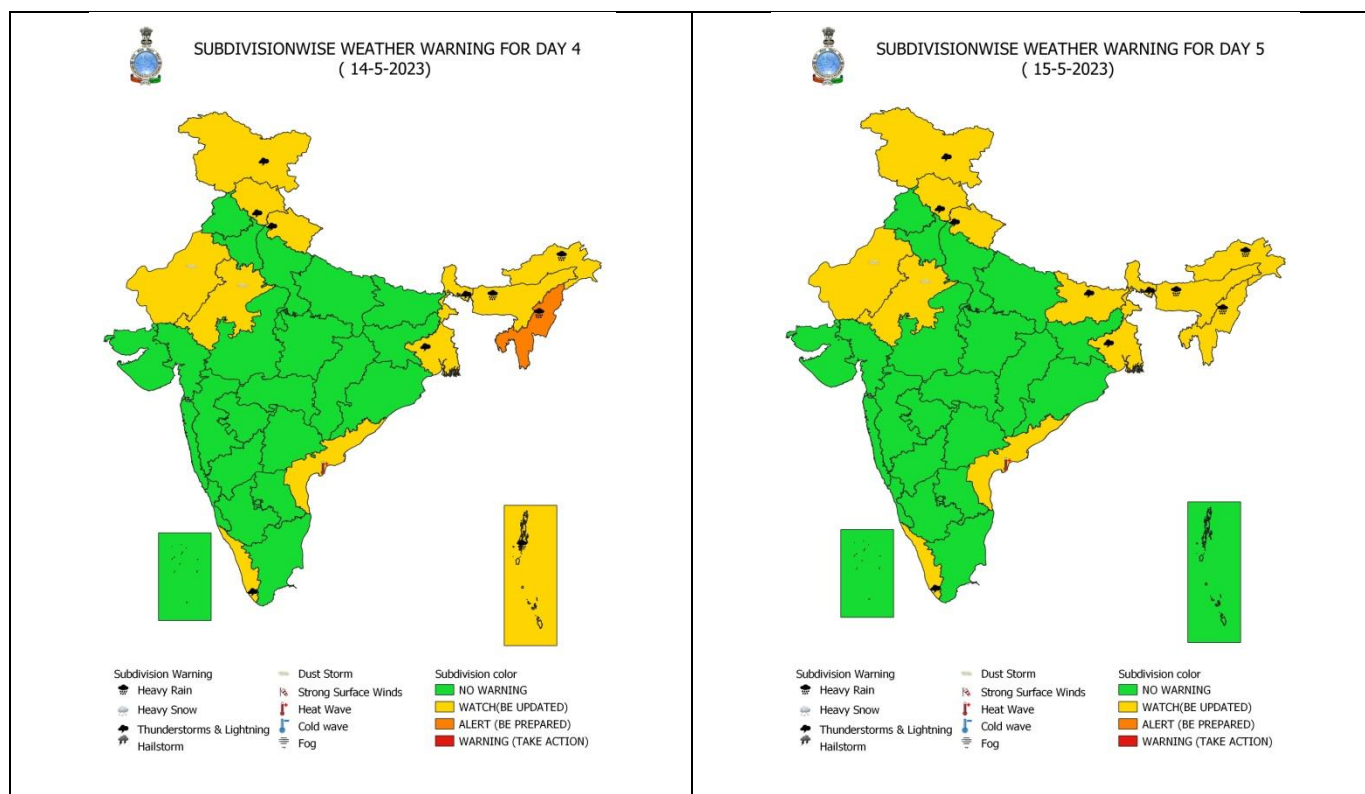
<https://mausam.imd.gov.in/responsive/districtWiseNowcast.php>

Annexure I

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

- ❖ **Rainfall/thundershowers observed at most places** over Andaman & Nicobar Islands; **at many places** over Kerala & Mahe; **at a few places** over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Lakshadweep, Coastal Karnataka and **at isolated places** over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Rayalaseema, West Bengal & Sikkim, Odisha, Chhattisgarh, Tamil Nadu, Puducherry & Karaikal and Interior Karnataka.
- ❖ **Heavy Rainfall observed:** at isolated places over Nicobar Islands.
- ❖ **Significant rainfall recorded** (in cm): **Nicobar Islands:** Car Nicobar (dist Nicobar) 8; **Tamil Nadu:** Suralacode (dist Kanyakumari) 5, Mettupalayam (dist Coimbatore), Coimbatore South (dist Coimbatore), Perunchani Dam (dist Kanyakumari) 4 each,, **Kerala:** Irinjalakuda (Thrissur district) 6, Mavelikkara (Alappuzha district) 4, **Karnataka:** Dharmasthala (Dakshina Kannada dt), Karwar, B Bagewadi (Vijayapura dt), Yedwad (Belagavi dt), Davanagere 3 each; Telangana: Chevella(arg) (dist Rangareddy) 3, **Assam & Meghlaya:** Karimganj (dist Karimganj) 3, **Odisha:** Suliapada (dist Mayurbhanj) 4,
- ❖ **Hailstorm** observed in isolated pockets over Gangetic West Bengal.
- ❖ Yesterday, **Heat wave conditions** observed in isolated pockets over West Bengal and Bihar.





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- ❖ Minor Damage to loose/unsecured structures
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Action Suggested

- ❖ Immediately harvest mature fruits and crops.
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- ❖ Avoid application of fertilizers and pesticides.
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(ii) 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.

(iii) IMPACT & ACTION SUGGESTED due to Heat Wave over Bihar, West Bengal, Gujarat state and Madhya Maharashtra:

❖ Yellow alert Areas:

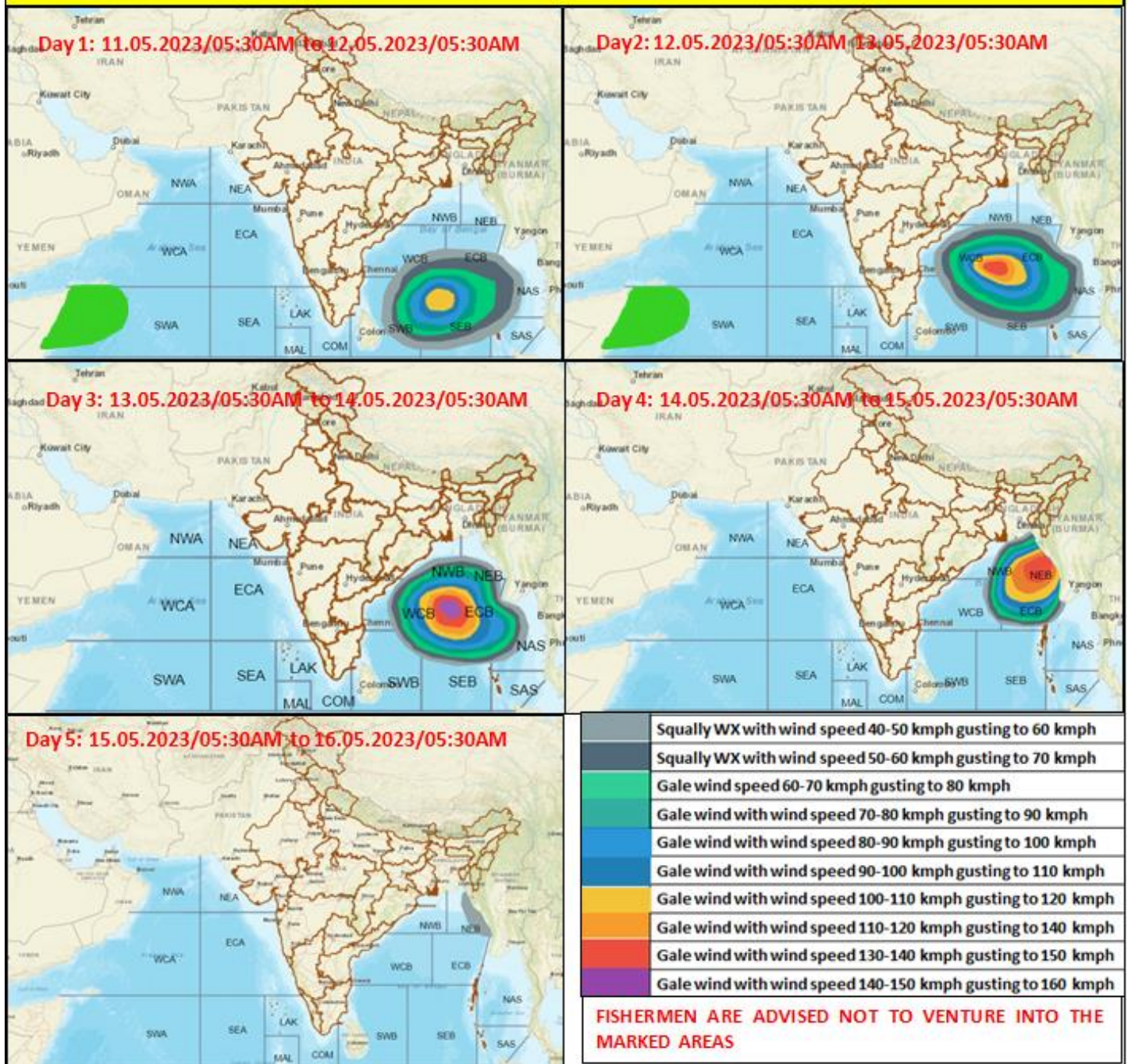
(1) Moderate temperature, Heat is tolerable for general public but moderate health concern for vulnerable people e.g. infants, elderly, people with chronic diseases. (2) Avoid heat exposure, Wear lightweight, light coloured, loose, cotton clothes, Cover your head, use a cloth, hat or umbrella.

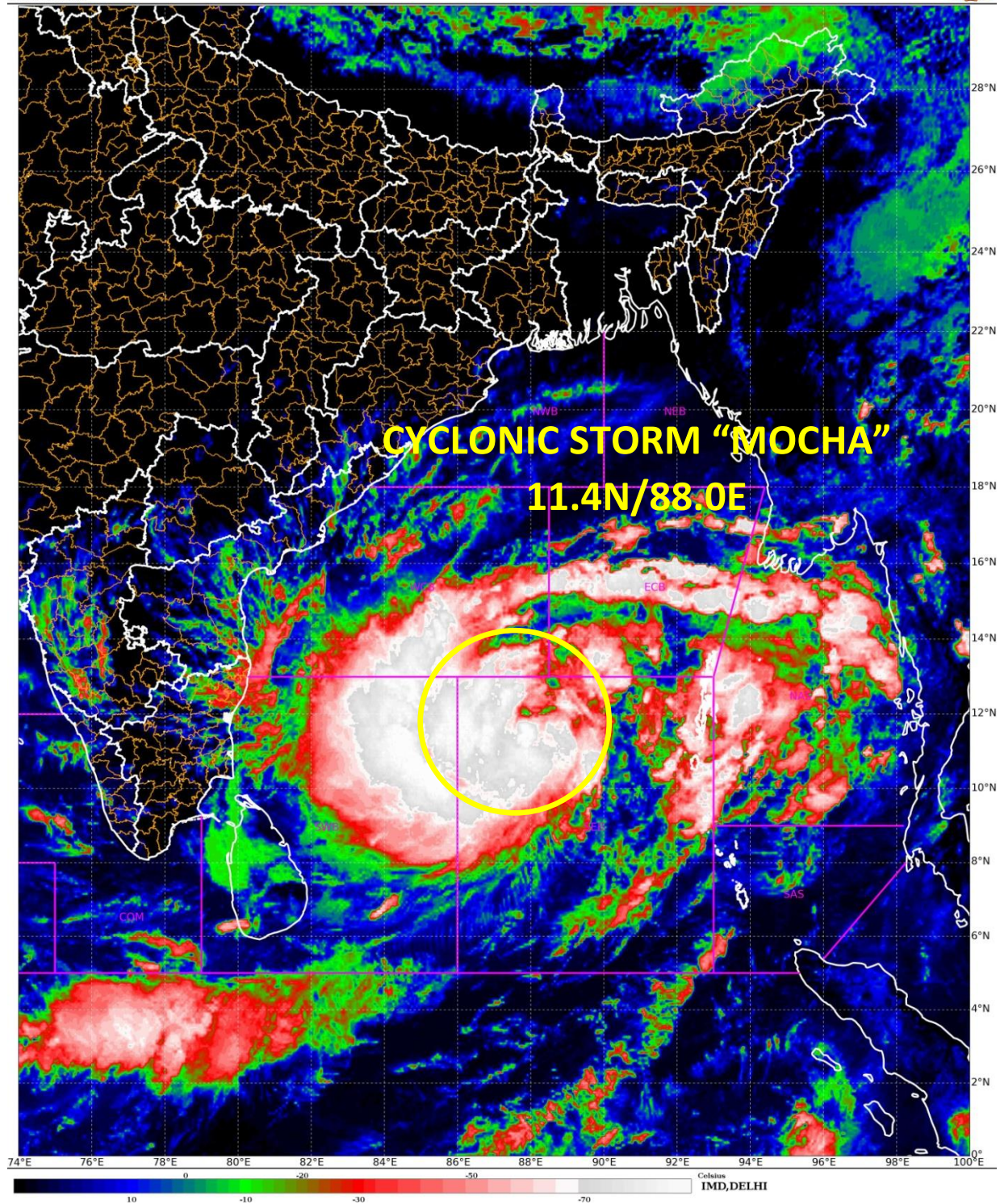
❖ Orange alert Areas:

(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.

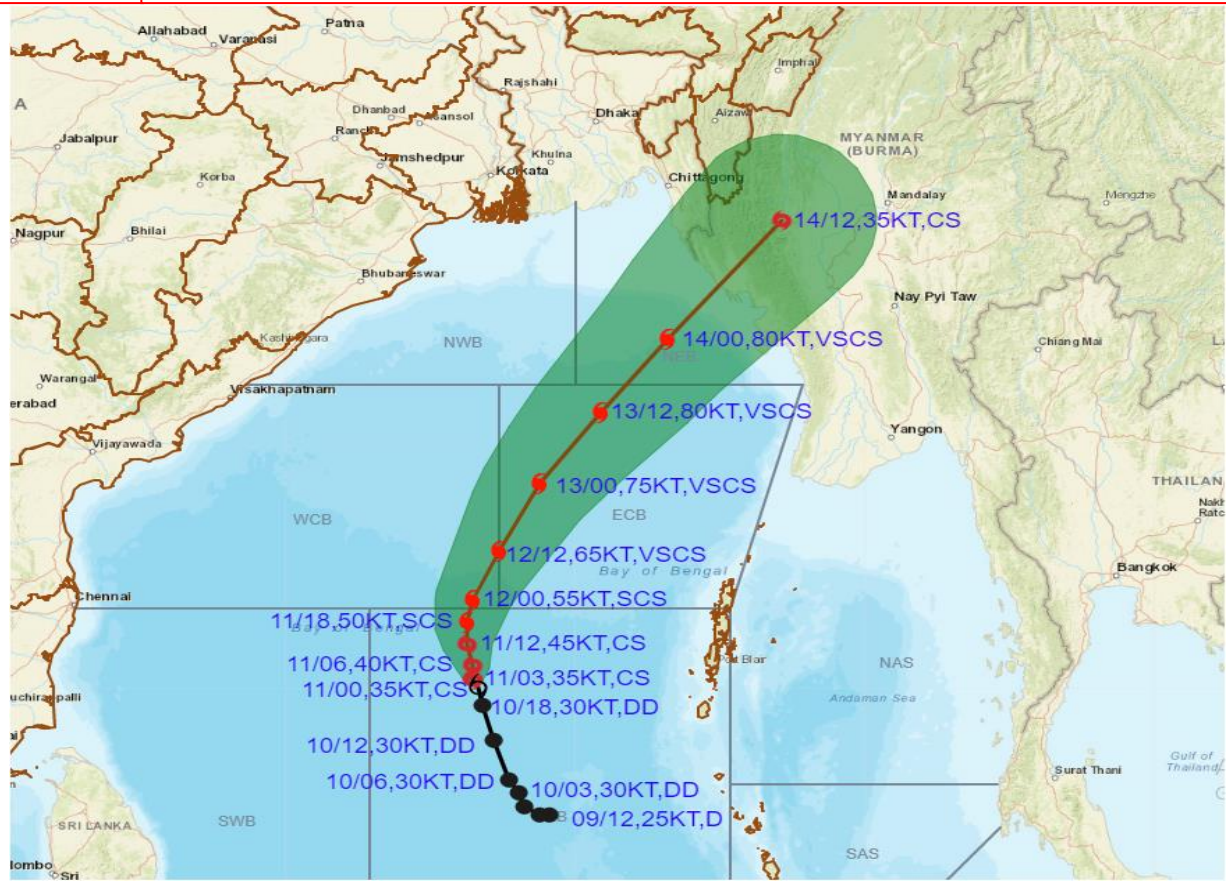
Fishermen warning graphics







OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF 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

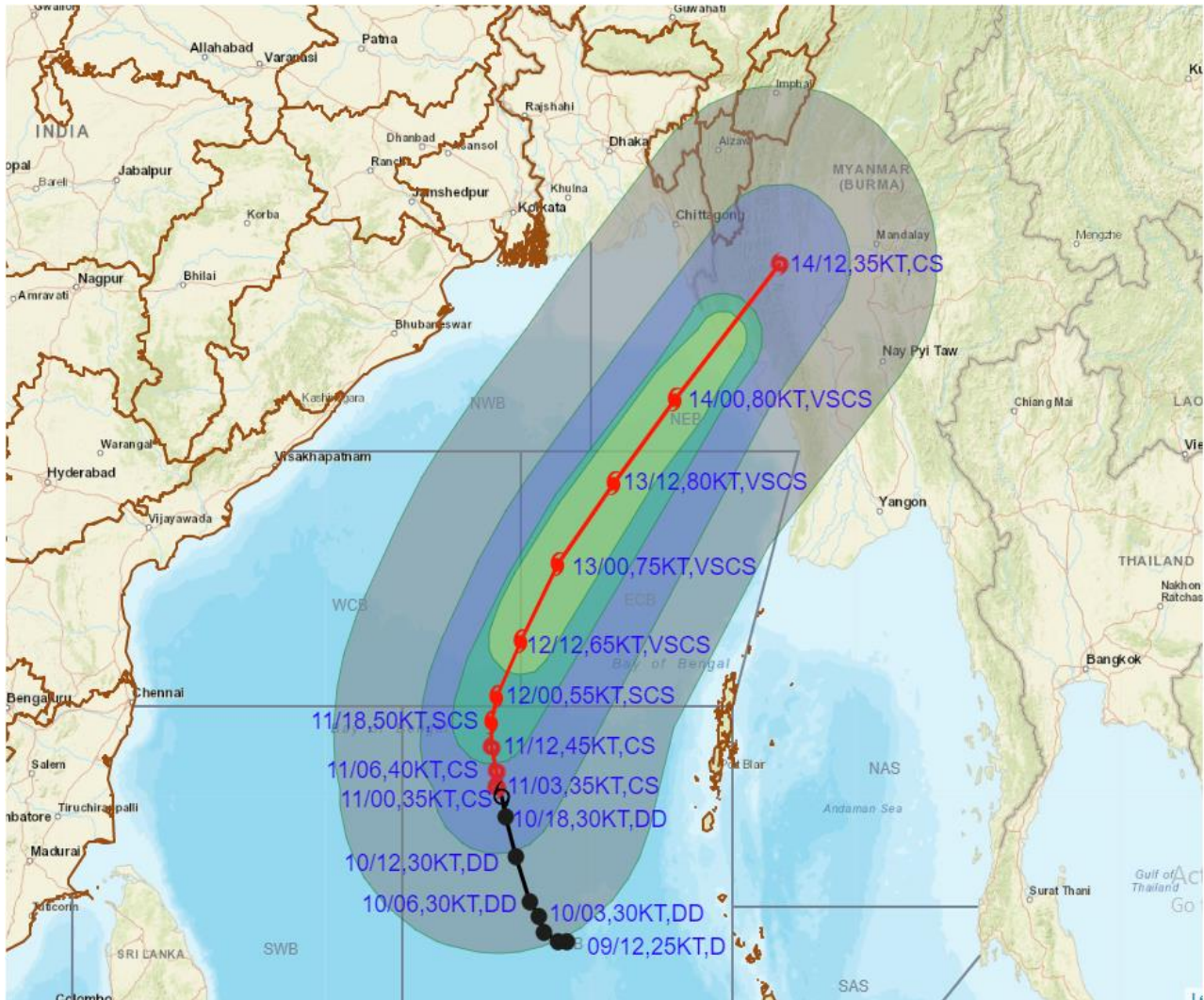
▲ CONE OF UNCERTAINTY

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 (48-63 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		Subdivision color	
	Heavy Rain		NO WARNING
	Heavy Snow		WATCH(BE UPDATED)
	Thunderstorms & Lightning		ALERT (BE PREPARED)
	Hailstorm		WARNING (TAKE ACTION)
	Dust Storm		
	Strong Surface Winds		
	Heat Wave		
	Cold wave		
	Fog		

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