



**India Meteorological Department
(Ministry of Earth Sciences)**

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Sub: Severe Cyclonic Storm "MICHAUNG" (pronounced as MIGJAUM) over Westcentral Bay of Bengal off south Andhra Pradesh coast (Cyclone Warning for Andhra Pradesh Coast: **Red Message)**

The Severe Cyclonic Storm "MICHAUNG" (pronounced as MIGJAUM) over Westcentral Bay of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts moved northwards with a speed of 07 kmph during past 06 hours and lay centered at 0530 hours IST of today, the 5th December, 2023 over Westcentral Bay of Bengal off south Andhra Pradesh coast near Latitude 14.9°N and Longitude 80.2°E, about 20 km east of Kavali, 50 km north-northeast of Nellore, 200 km north of Chennai, 110 km south-southwest of Bapatla and 170 km south-southwest of Machilipatnam.

As the system is nearly moving northwards close to coast, some parts of the wall cloud region lies over land. The system is likely to move nearly northwards parallel and close to south Andhra Pradesh coast and cross south Andhra Pradesh coast between Nellore and Machilipatnam, **close to Bapatla during forenoon of 5th December as a Severe Cyclonic Storm with a maximum sustained wind speed of 90-100 kmph gusting to 110 kmph.**

Track and Intensity Forecasts:

Date/Time (IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
05.12.23/0530	15.1/80.2	90-100 kmph gusting to 110 kmph	Severe Cyclonic Storm
05.12.23/1130	15.7/80.3	85-95 kmph gusting to 105 kmph	Severe Cyclonic Storm
05.12.23/1730	16.2/80.5	70-80 kmph gusting to 90 kmph	Cyclonic Storm
05.12.23/2330	16.6/80.8	55-65 kmph gusting to 75 kmph	Deep Depression
06.12.23/0530	17.3/81.6	40-50 kmph gusting to 60 kmph	Depression

Warnings:

(i) Rainfall Warning (graphics enclosed):

- **North Coastal Tamil Nadu & Puducherry:** Light to moderate rainfall at many places with isolated heavy rainfall on 5th December and decrease thereafter.
- **Coastal Andhra Pradesh:** Light to moderate rainfall at most places and heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 5th December. **Exceptionally heavy rainfall** at one or two places is also likely over north coastal and adjoining south coastal Andhra Pradesh on 5th December. Isolated heavy rainfall is likely over north coastal Andhra Pradesh on 6th December.
- **Rayalaseema:** Light to moderate rainfall at many places with isolated heavy rainfall on 5th December and decrease thereafter.
- **Telangana:** Light to moderate rainfall at most places with isolated heavy to extremely heavy rainfall on 5th December.
- **Odisha:** Light to moderate rainfall at most places with isolated heavy to very heavy rainfall is likely over south Coastal and adjoining south Interior Odisha on 5th and isolated heavy rainfall over the same region on 6th December.

(ii) Wind warning:

- **Southwest Bay of Bengal along & off north Tamil Nadu-Puducherry Coasts:**
Squally wind speed reaching **40-50 kmph gusting to 60 kmph** is prevailing along and off north Tamilnadu coast (Chennai and to its north). It would decrease gradually becoming **30-40 kmph gusting to 50 kmph** by forenoon of 5th December.
- **Westcentral Bay of Bengal and along & off south Andhra Pradesh Coast:**
Gale wind speed reaching **90-100 kmph gusting to 110 kmph** would prevail over westcentral Bay of Bengal around system centre till morning of 5th and gradually decreases thereafter.
Gale wind speed reaching **70-80 kmph gusting to 90 kmph** prevailing along and off Nellore district & **90-100 kmph gusting to 110 kmph** along and off remaining districts of south Andhra Pradesh coast till 5th December is likely to continue till forenoon and gradually decrease thereafter.
- **Along & off north Andhra Pradesh Coast:**
Squally wind speed reaching **50-60 kmph gusting to 65 kmph** is prevailing, it is likely to continue during next 12 hours. It would gradually decrease thereafter.
- **Along & off Odisha Coast:**
Squally wind speed reaching **35-45 kmph gusting to 55 kmph** is likely to prevail till afternoon of 5th and it is likely to gradually increase becoming **40-50 kmph gusting to 60 kmph** from 5th December evening for subsequent 12 hours. It would gradually decrease thereafter.

(iii) Sea Condition:

• **Southwest Bay of Bengal and along & off north Tamil Nadu-Puducherry Coasts:**

Very rough to rough sea condition is prevailing. It is likely to become rough to moderate by noon of 5th December and further improve thereafter.

• **Westcentral Bay of Bengal and along & off south Andhra Pradesh Coast:**

High to very high sea condition is prevailing over the region. It is likely to continue till 5th December noon. It is likely to improve thereafter gradually becoming very rough by 5th evening and rough by 6th morning for subsequent 12 hours.

• **Along & off North Andhra Pradesh Coast:**

Rough to Very Rough to sea condition is likely till 6th December morning and further improve thereafter.

• **Along & off Odisha Coast:**

Rough to Very Rough to sea condition is likely till 6th December morning.

(iv) Fishermen Warning (graphics attached):

Fishermen are advised not to venture into:

- Southwest Bay of Bengal and along & off North Tamil Nadu-Puducherry Coasts till 5th December.
- Westcentral Bay of Bengal and along & off Andhra Pradesh Coast till 6th December.
- Northwest Bay of Bengal and along & off Odisha coast till 6th December.

(v) Storm Surge (Graphics enclosed):

Storm surge of about 1-1.5 meter above astronomical tide likely to inundate south Coastal Andhra Pradesh districts at the time of landfall.

(vi) Post landfall outlook:

After landfall while weakening gradually, the system will maintain the intensity of cyclonic storm for about 12 hours. The wind speed will gradually decrease to 75-85 kmph gusting to 95 kmph by evening of 5th December and further gradually decrease thereafter. Light to moderate rainfall at many places with isolated heavy fall over south Chattisgarh on 6th December 2023.

(vii) Damage Expected over coastal districts of South Andhra Pradesh (Nellore, Tirupati Prakasam, Bapatla, Guntur, Krishna and West Godavari) and adjoining coastal districts of North Tamil Nadu-Puducherry:

- Major damage to thatched houses/ huts. Roof tops may blow off. Unattached metal sheets may fly.
- Possibilities of damage to vulnerable structure.
- Breaking of tree branches, uprooting of large avenue trees. Major damage to banana and papaya trees. Large dead limbs blown from trees.
- Minor damage to power and communication lines due to breaking of branches and uprooting of trees.
- Major damage to Kutcha and minor damage to Pucca roads due to heavy rain.
- Damage to paddy crops, horticultural crops and orchards.
- Sea water inundation in low lying areas after erosion of Kutcha embankments
- Inundation of low lying areas in coastal districts due to heavy rainfall and flash flood
- Localized Flooding of roads and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic due to water logging and squally winds
- Localized Landslides/Mudslides
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

(viii) Action Suggested for coastal districts of South Andhra Pradesh and adjoining coastal districts of North Tamil Nadu-Puducherry:

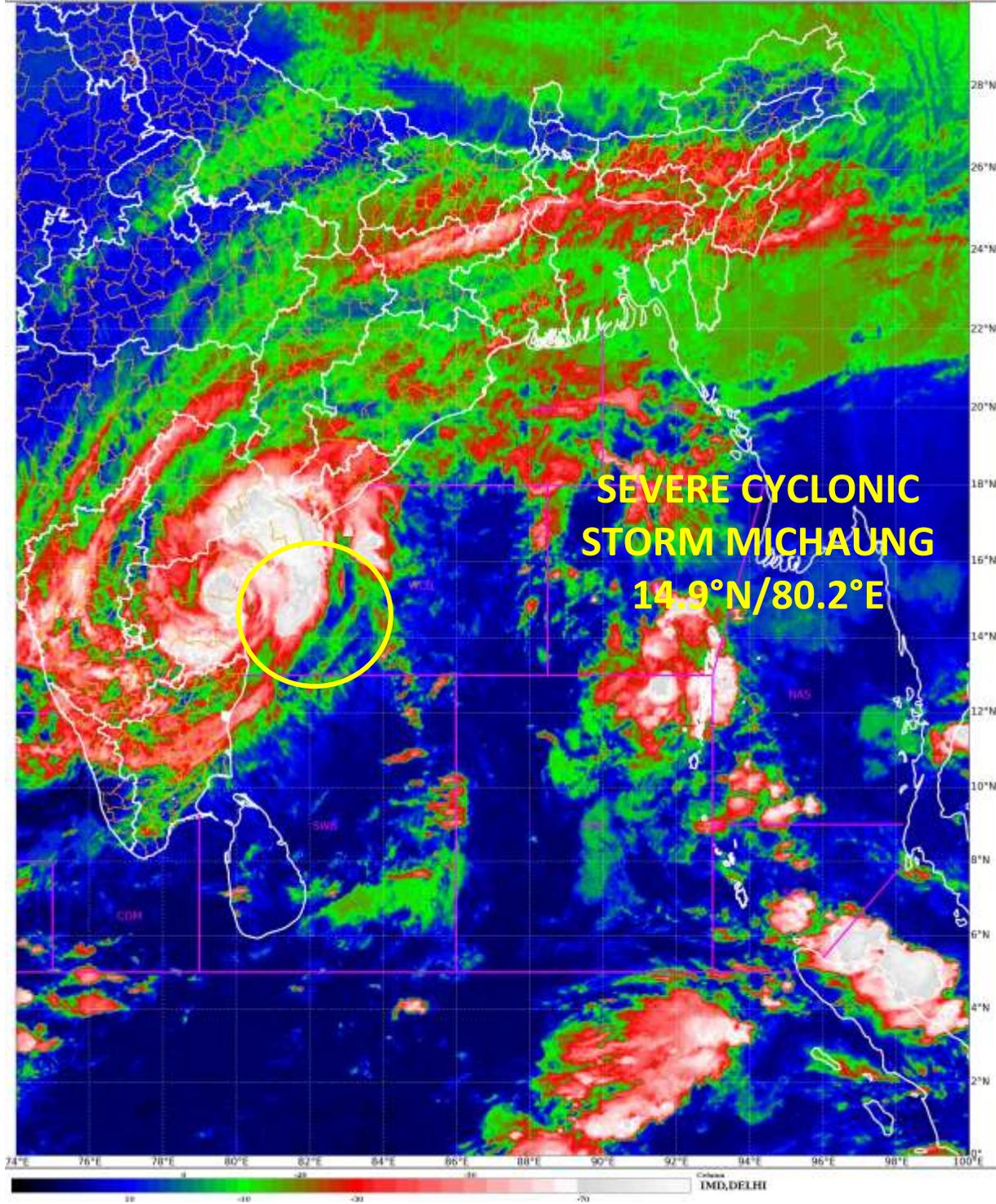
- Total suspension of fishing operations.
- Surface transport and shipping operations need to be regulated
- Onshore & Offshore operation need to be regulated as per guidelines
- Coastal hutment dwellers to be in safer places.
- People in affected areas to remain indoors.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

The system is under continuous surveillance and the next message will be issued at 1130 hours IST of 05th December, 2023.

(S.P. SINGH)

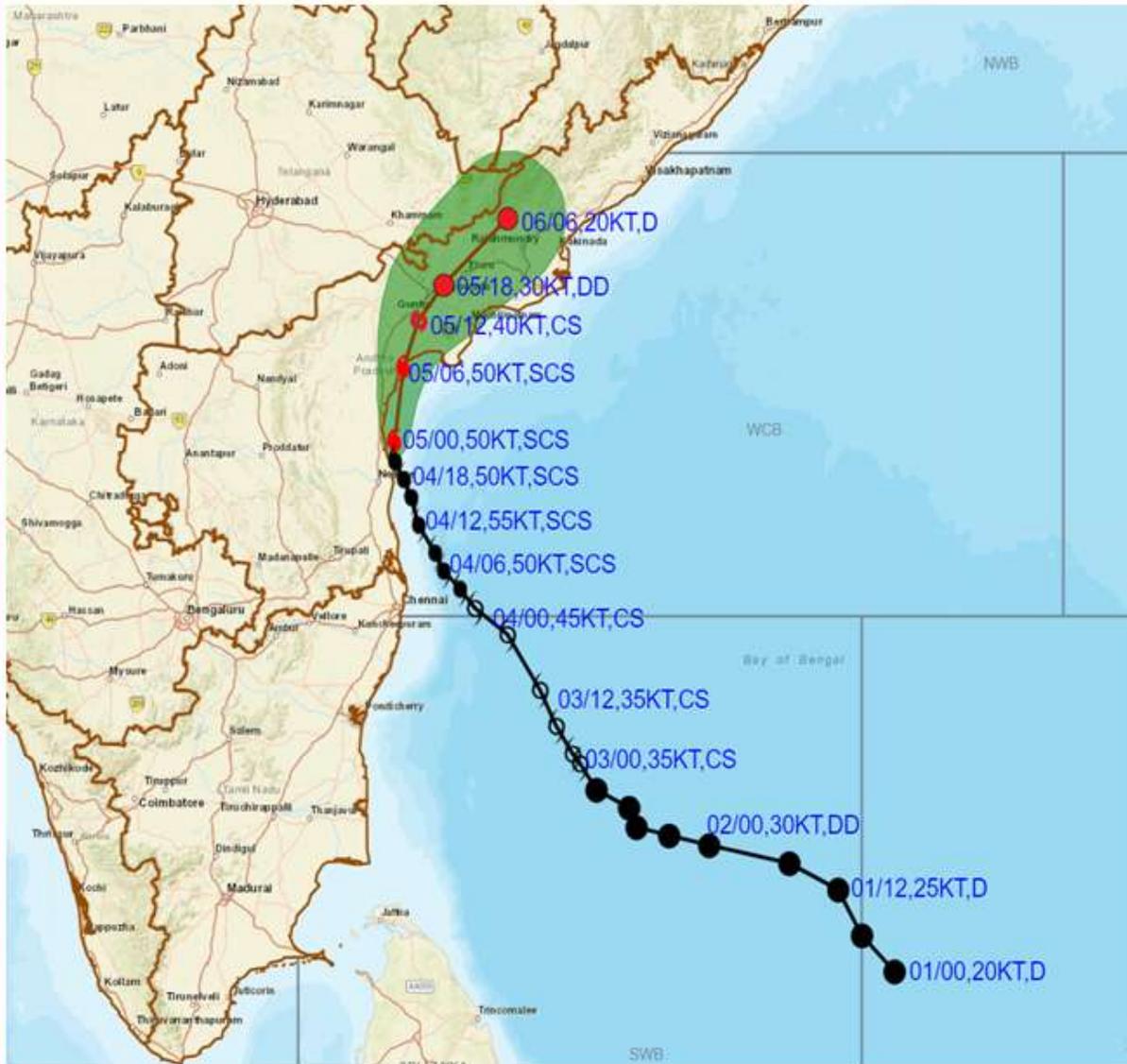
Scientist C, Cyclone Warning Division, New Delhi

Copy to: ACWC Chennai/ ACWC Kolkata/ CWC Bhubaneswar/ CWC Vishakhapatnam/ MC Amravati





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH SEVERE CYCLONIC STORM "MICHAUNG" OVER WESTCENTRAL BAY OF BENGAL BASED ON 0000 UTC (0530 IST) OF 5TH DECEMBER 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

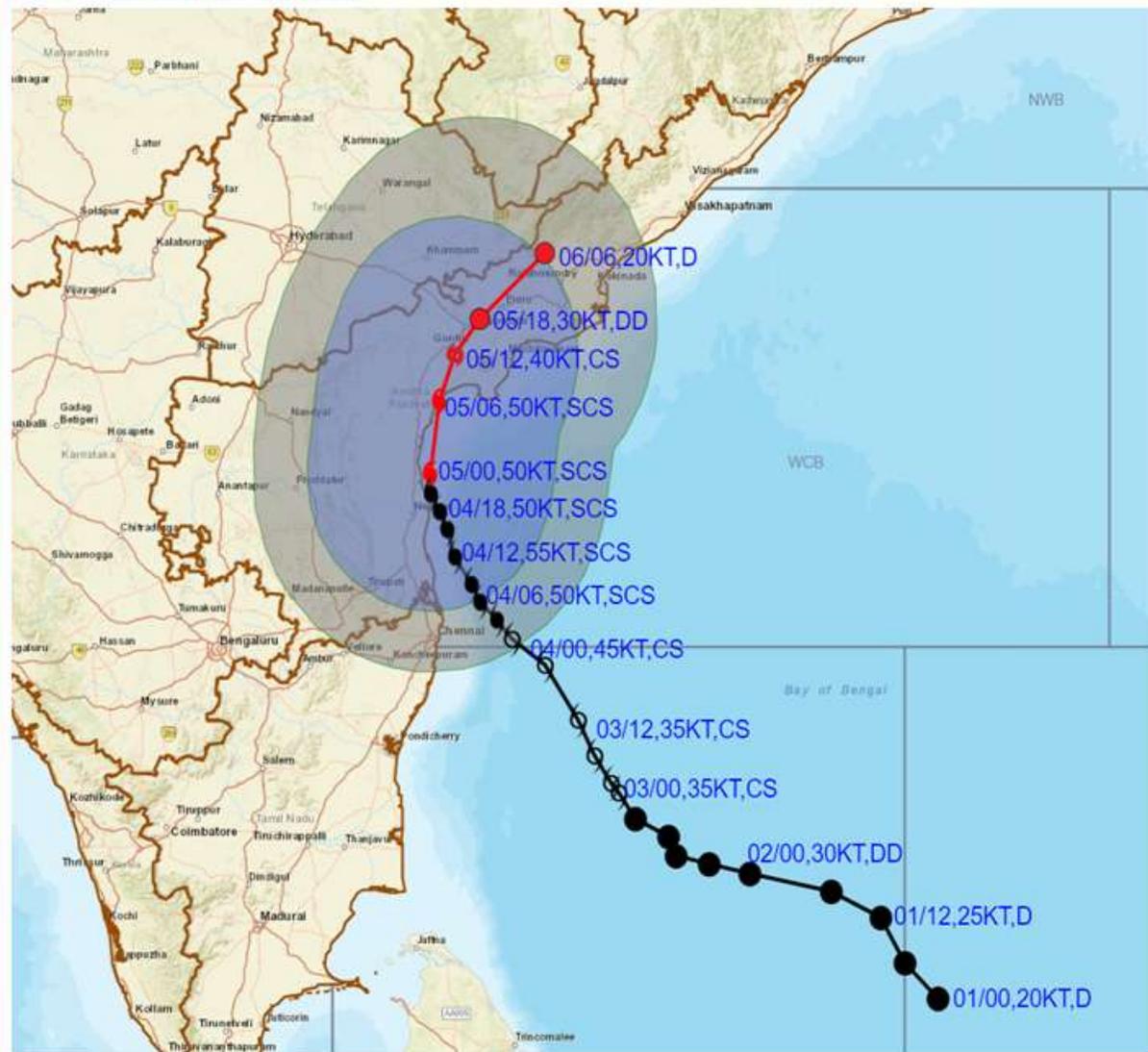
— FORECAST TRACK

▲ CONE OF UNCERTAINTY

Forecast Date and Time (UTC)	DISTANCE (KM) AND DIRECTION FROM STATIONS				
	CHENNAI/MINAMB AKKAM	NELLORE	MO PONDICHERRY	BAPATLA	MACHILIPATNAM/ FRANCHPET
05.12.23/0000	220, N	60, NNE	330, N	120, SSW	170, SW
06.12.23/0600	510, NNE	370, NNE	630, NNE	200, NE	140, NNE



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND IN ASSOCIATION WITH SEVERE CYCLONIC STORM "MICHAUNG" OVER WESTCENTRAL BAY OF BENGAL BASED ON 0000 UTC (0530 IST) OF 5TH DECEMBER 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)

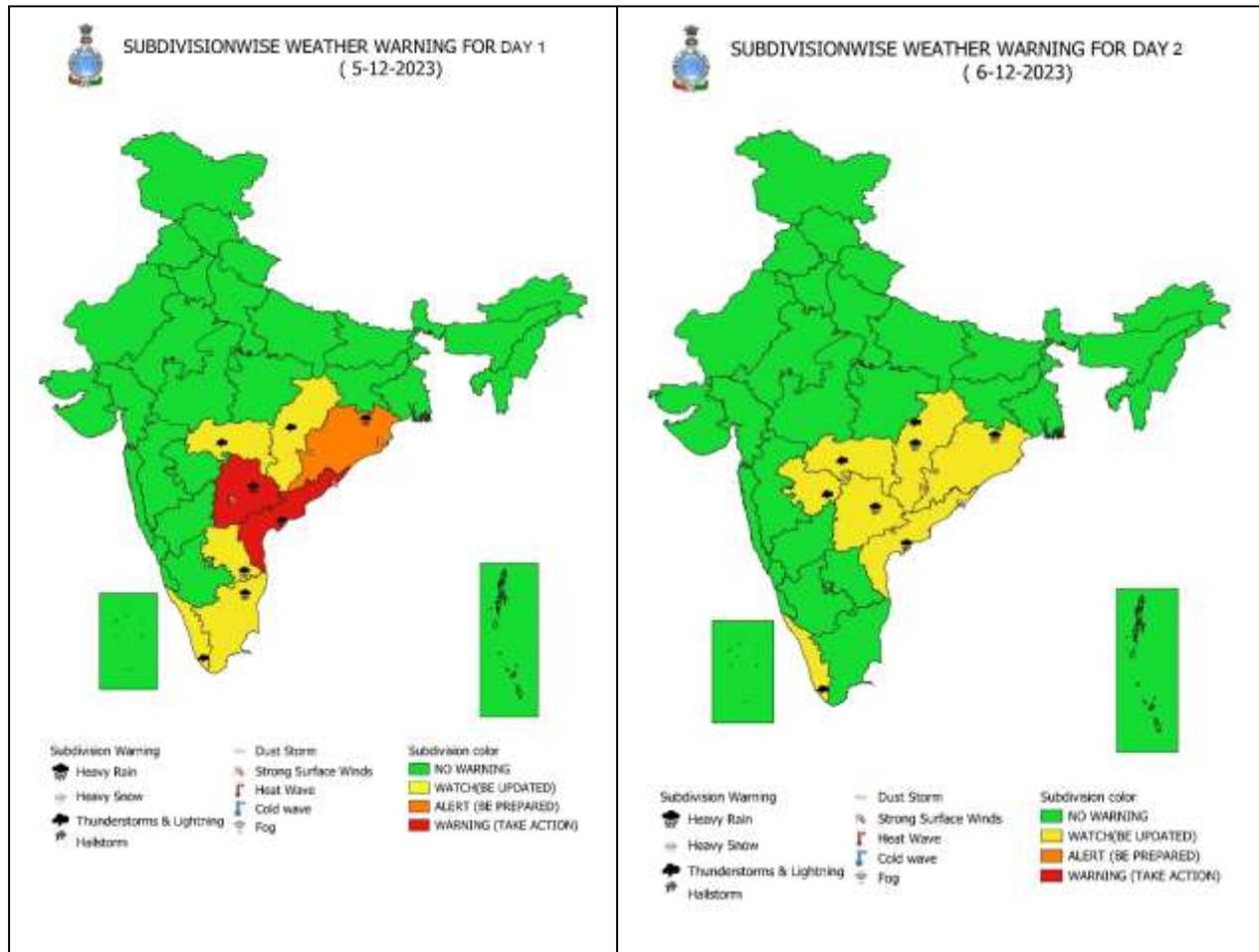
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

- 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

Weather Warning Graphics





**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(7-12-2023)**



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



**SUBDIVISIONWISE RAINFALL FORECAST FOR DAY 4
(8-12-2023)**



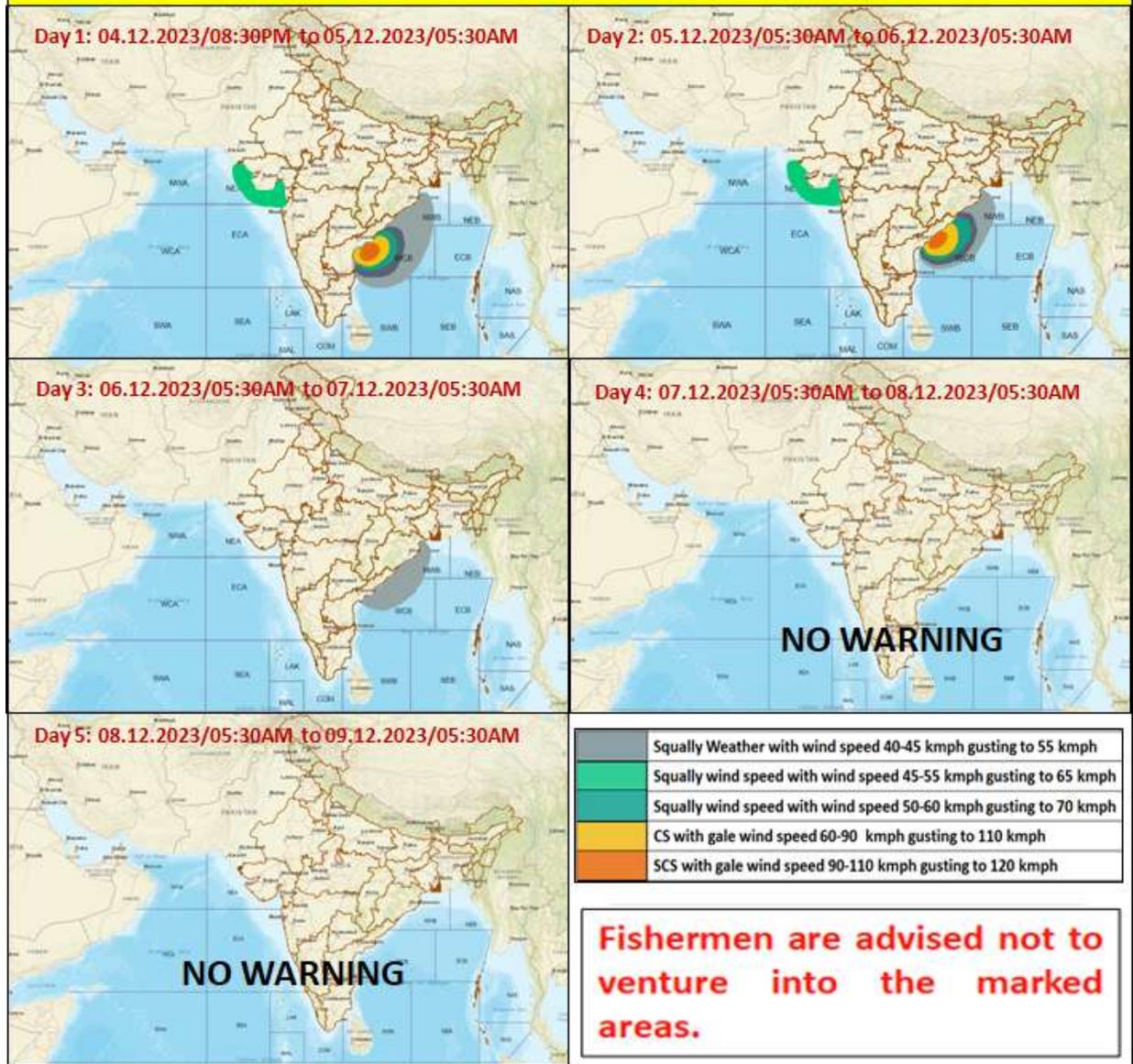
- | | | |
|--|---|---|
| Subdivision Warning
Heavy Rain
Heavy Snow
Thunderstorms & Lightning
Hailstorm | Dust Storm
Strong Surface Winds
Heat Wave
Cold wave
Fog | Subdivision color
NO WARNING
WATCH(BE UPDATED)
ALERT (BE PREPARED)
WARNING (TAKE ACTION) |
|--|---|---|

WARNING



- | | | | |
|--------------|------------|--------------|--------------|
| Heavy Rain | Heavy Snow | Thunderstorm | Dust Storm |
| Strong Winds | Visibility | Cyclone | Squall/ Hail |
| Frost | Cold Wave | Heat Wave | Sea State |

Fishermen Warning Graphics

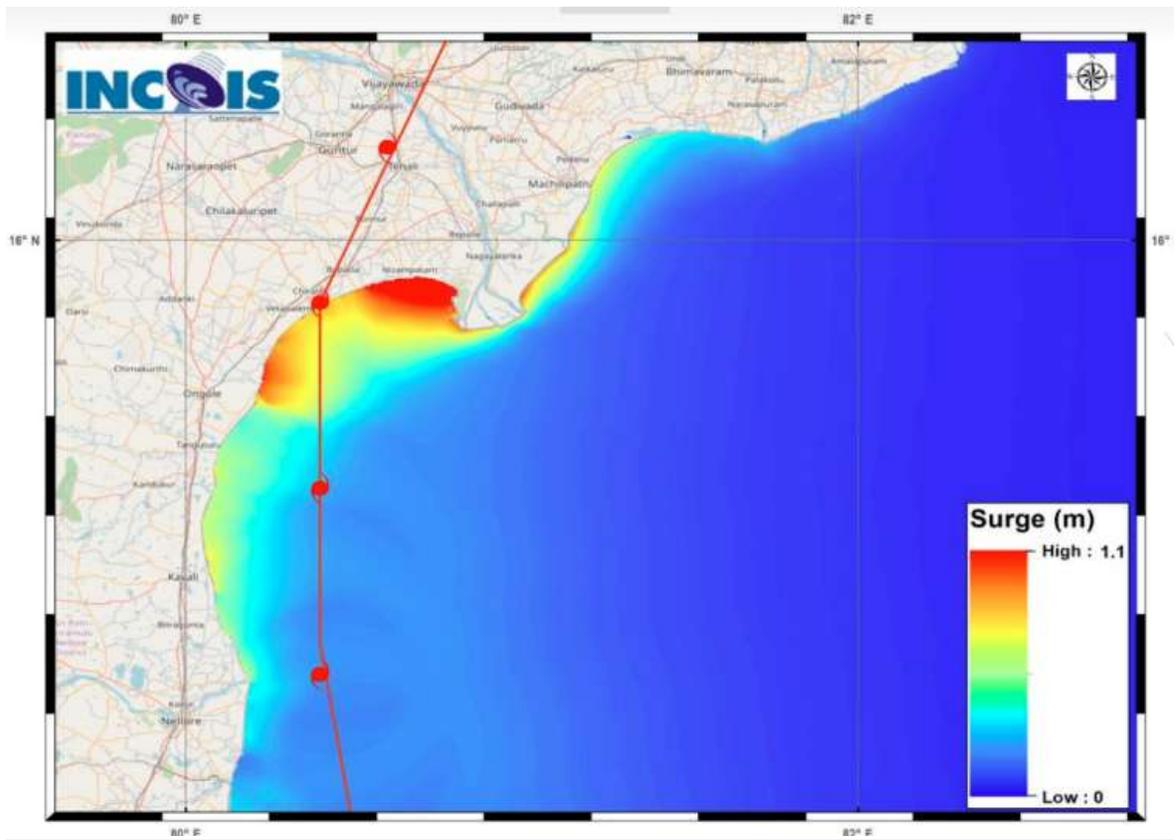


Storm Surge Warning Graphics based on Forecast Track

STORM SURGE HEIGHT INFORMATION:

* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m)	EXPECTED INUNDATION EXTENT (km)
Repalle	Guntur	Andhra Pradesh	Repalle	0.5-1.1	Upto 0.23
Avanigadda	Krishna	Andhra Pradesh	Ramakrishnapuram	0.3-0.9	Upto 0.25
Bapatla	Guntur	Andhra Pradesh	Bapatla	0.4-0.7	Upto 0.19
Sullurpeta	Nellore	Andhra Pradesh	Duggaraja Patnam	0.2-0.7	Upto 0.18
Chirala	Prakasam	Andhra Pradesh	Kotha Peta (Rural)	0.4-0.5	Upto 0.12
Machilipatnam	Krishna	Andhra Pradesh	Chinagollapalem	0.2-0.5	Upto 0.15
Ongole	Prakasam	Andhra Pradesh	Kanuparthi	0.2-0.6	Upto 0.15

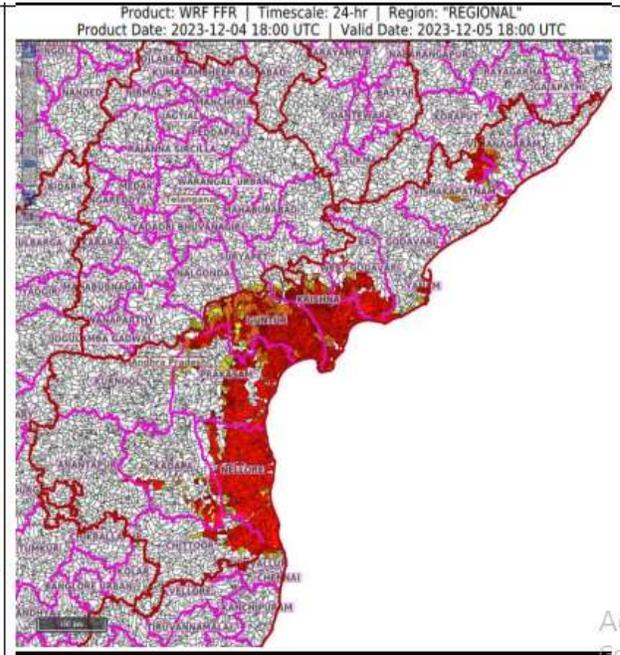


Flash Flood Guidance

24 hours Outlook for the Flash Flood Risk (FFR) till 2330 IST of 05-12-2023 :

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of following coastal districts of **Andhra Pradesh, Telangana, Puducherry and Tamil Nadu** during next 24 hours.

Vizianagarm, Vishakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Kadapa, Kurnool, Chittoor, Prakasam and Nellore districts of **Andhra Pradesh**; Tiruvallur and Chennai districts of **Tamil Nadu**; Yanam district of **Puducherry** and Suryapet and Nagarkurnool districts of **Telangana**.



Hazard Map with Severe Cyclonic Storm MICHAUNG over Westcentral & adjoining off south Andhra Pradesh and adjoining north Tamilnadu coasts

