

Government of India Ministry of Earth Sciences



India Meteorological Department

# PRESS RELEASE-4

Time of issue: 1300 hours IST

Dated: 4<sup>th</sup> December, 2023

Sub: Cyclonic Storm "MICHAUNG" (pronounced as MIGJAUM) over Westcentral & adjoining Southwest Bay of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts intensified into Severe Cyclonic Storm over the same region (Cyclone Warning for Andhra Pradesh and adjoining North Tamil Nadu-Puducherry Coasts: Red Message)

Yesterday's Cyclonic Storm "MICHAUNG" (pronounced as MIGJAUM) over Southwest Bay of Bengal moved northwestwards, intensified into a **Severe Cyclonic Storm** over the Westcentral & adjoining Southwest Bay of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts and lay centered at 0830 hours IST of 4th December, 2023 over the same region near Latitude 13.3°N and Longitude 81.0°E, about 90 km east-northeast of Chennai, 170 km southeast of Nellore, 200 km northeast of Puducherry, 300 km south-southeast of Bapatla and 320 km south of Machilipatnam.

It is likely to intensify gradually and move nearly northwards almost 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.

Date/Time (IST)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance	
04.12.23/0830	13.3/81.0	85-95 kmph gusting to 105 kmph	Severe Cyclonic Storm	
04.12.23/1130	13.7/80.8	90-100 kmph gusting to 110 kmph	Severe Cyclonic Storm	
04.12.23/1730	14.2/80.6	95-105 kmph gusting to 115 kmph	Severe Cyclonic Storm	
04.12.23/2330	14.7/80.5	95-105 kmph gusting to 115 kmph	Severe Cyclonic Storm	
05.12.23/0530	15.4/80.4	90-100 kmph gusting to 110 kmph	Severe Cyclonic Storm	
05.12.23/1730	16.3/80.6	70-80 kmph gusting to 90 kmph	Cyclonic Storm	
06.12.23/0530	17.1/81.1	50-60 kmph gusting to 70 kmph	Deep Depression	
06.12.23/1730	17.8/81.8	35-45 kmph gusting to 55 kmph	Depression	

**Track and Intensity Forecasts:** 

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences. Phone:(91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail:cwdhq2008@gmail.com, Website: rsmcnewdelhi.imd.gov.in Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

## Warnings:

#### (i) Rainfall Warning (graphics enclosed):

- North Coastal Tamil Nadu & Puducherry: Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places with isolated extremely heavy falls is very likely on 4<sup>th</sup> and isolated heavy rainfall on 5<sup>th</sup> 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 4<sup>th</sup> & 5<sup>th</sup> December. Exceptionally heavy rainfall at one or two places is also likely over south coastal Andhra Pradesh on 4<sup>th</sup> and over north coastal and adjoining south coastal Andhra Pradesh on 5<sup>th</sup> December. Isolated heavy rainfall is likely over north coastal Andhra Pradesh on 6<sup>th</sup> December.
- **Rayalaseema:** Light to moderate rainfall at many places with isolated heavy to extremely heavy falls is very likely on 4<sup>th</sup> and isolated heavy rainfall on 5<sup>th</sup> December and decrease thereafter.
- **Telangana:** Light to moderate rainfall at few places with isolated heavy rainfall is likely on 4<sup>th</sup>. It is likely to increase becoming light to moderate rainfall at most places with isolated heavy to extremely heavy rainfall over the same region on 5<sup>th</sup> December.
- Odisha: Light to moderate rainfall at most places with isolated heavy rainfall is likely over south Coastal and adjoining south Interior Odisha during 4<sup>th</sup> & 6<sup>th</sup> with isolated heavy to very heavy rainfall over the same region on 5<sup>th</sup> December.

#### (ii) Wind warning:

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

**Gale wind** speed reaching **85-95 kmph gusting to 105 kmph** is prevailing around the center. It is likely to continue for next 6 hours and gradually decrease thereafter.

The Gale wind speed reaching **60-70 kmph gusting to 80 kmph** is prevailing along and off northTamilnadu coast (Chennai and to its north). It is likely to continue during next 6 hours and gradually decrease thereafter.

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

**Gale wind** speed reaching **85-95 kmph gusting to 105 kmph is** prevailing over westcentral Bay of Bengal. It is likely to gradually increase becoming **90-100 kmph gusting to 110 kmph** from 4<sup>th</sup> afternoon and **95-105 kmph gusting to 115 kmph** from 4<sup>th</sup> mid night till 5<sup>th</sup> December morning. It would become **90-100 kmph gusting to 110 kmph** from morning of 5<sup>th</sup> till noon of 5<sup>th</sup> and further gradually decrease thereafter.

Gale wind speed reaching 60-70 kmph gusting to 80 kmph is prevailing along and off Nellore district & 50-60 kmph gusting to 70 kmph along and off remaining districts of south Andhra Pradesh coast. It is likely to gradually increase becoming 90-100 kmph gusting to 110 kmph from 4<sup>th</sup> December evening to 5<sup>th</sup> December noon.

#### • Along & off north Andhra Pradesh Coast:

**Squally wind** speed reaching **45-55 kmph gusting to 75 kmph** likely from 4<sup>th</sup> December evening, likely to gradually increase **becoming 55-65 kmph gusting to 75 kmph** from 5<sup>th</sup> December morning for subsequent 24 hours. It would gradually decrease thereafter.

#### • Along & off Odisha Coast:

**Squally wind** speed reaching **35-45 kmph gusting to 55 kmph** likely from 4<sup>th</sup> December evening, likely to gradually increase becoming **40-50 kmph gusting to 60 kmph** from 5<sup>th</sup> December evening for subsequent 12 hours. It would gradually decrease thereafter.

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Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

## (iii) Sea Condition:

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

**High sea condition** is prevailing and likely to continue till 4<sup>th</sup> December evening and likely to become high to very rough from 4<sup>th</sup> December night and very rough to rough thereafter till 5<sup>th</sup> December morning. It is likely to improve thereafter gradually.

## • 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 high to very rough from 5<sup>th</sup> evening and very rough to rough from 6<sup>th</sup> morning for subsequent 12 hours.

# • Along & off North Andhra Pradesh Coast:

**Rough to Very Rough to sea condition** is likely on 4<sup>th</sup> December, very rough to high on 5<sup>th</sup> and very rough to rough on 6<sup>th</sup> December.

#### • Along & off Odisha Coast:

**Rough to Very Rough to sea condition is** likely from 4<sup>th</sup> December evening till 6<sup>th</sup> 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 5<sup>th</sup> December.
- Westcentral Bay of Bengal and along & off Andhra Pradesh Coast till 6<sup>th</sup> December.
- Northwest Bay of Bengal and along & off Odisha coast till 6<sup>th</sup> 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) 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)

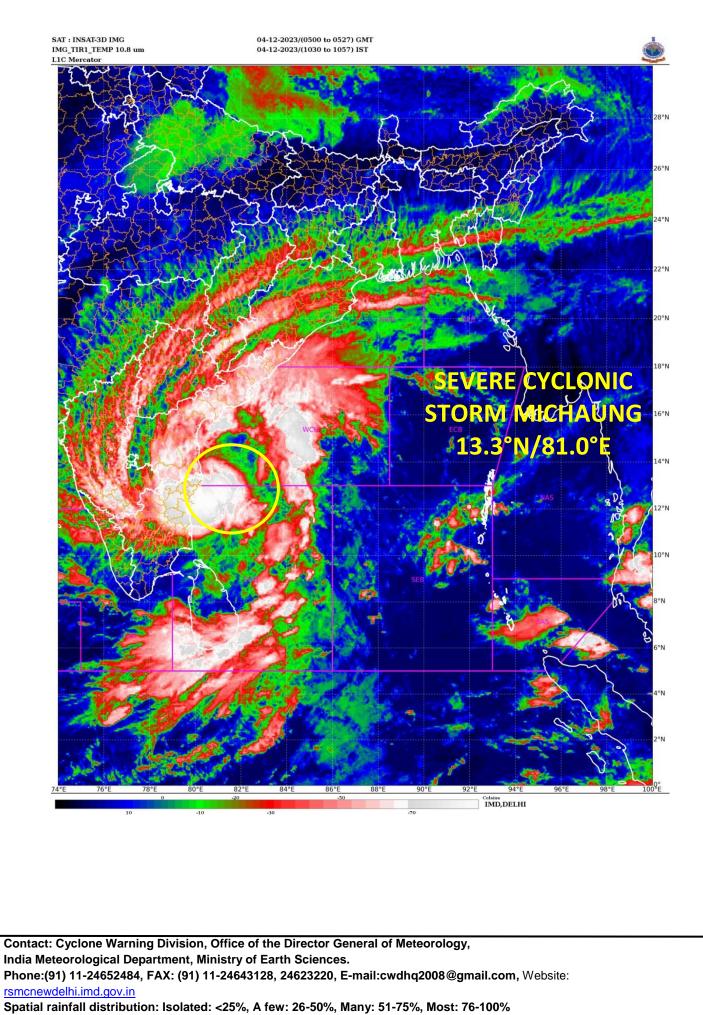
Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences. Phone:(91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail:cwdhq2008@gmail.com, Website: rsmcnewdelhi.imd.gov.in Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

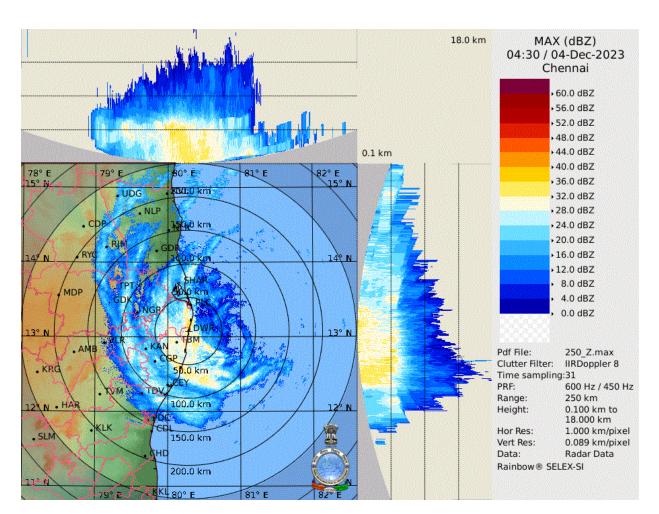
(vi) Action Suggested for coastal districts of South Andhra Pradesh and adjoining coastal districts of North Tamil Nadu-Puducherry:

- 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 Press Release will be issued at 1430 hours IST of 5<sup>th</sup> December, 2023.

For regular updates kindly visit www.rsmcnewdelhi.imd.gov.in and www.mausam.imd.gov.in



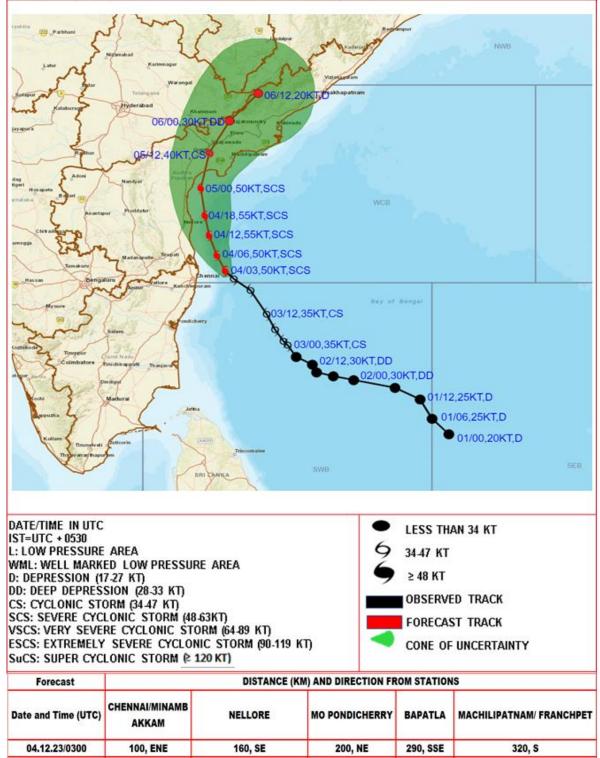


Chennai DWR

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences. Phone:(91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail:cwdhq2008@gmail.com, Website: <u>rsmcnewdelhi.imd.gov.in</u> Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100% Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINITY IN ASSOCIATION WITH SEVERE CYCLONIC STORM "MICHAUNG" OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 4<sup>TH</sup> DECEMBER 2023.



Contact: Cyclone Warning Division, Office of the Director General of Meteorology,

India Meteorological Department, Ministry of Earth Sciences.

270, N

470, NNE

05.12.23/0000

06.12.23/0000

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120, NNE

320, NNE

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 - 115.5, Very heavy rain: 115.6 - 204.4, Extremely heavy rain: 204.5 or more.

390, N

590, NNE

60, S

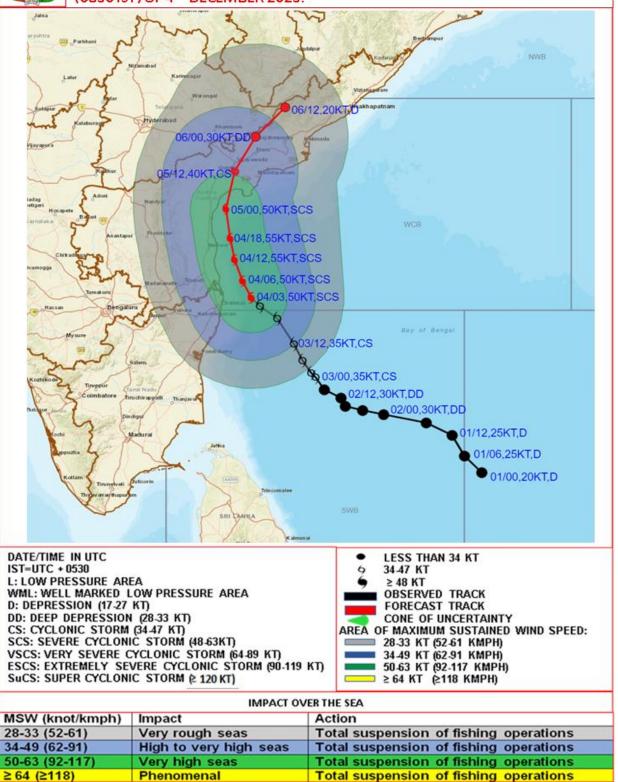
150, NNE

110, SW

110, N

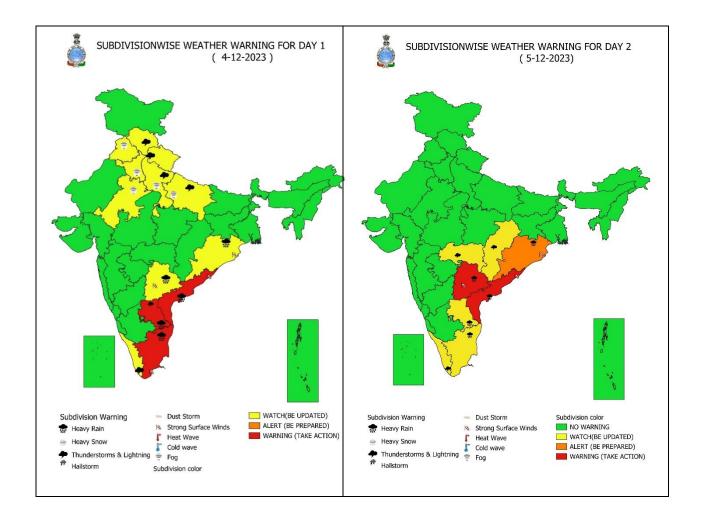


OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND IN ASSOCIATION WITH SEVERE CYCLONIC STORM "MICHAUNG" OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 4<sup>TH</sup> DECEMBER 2023.

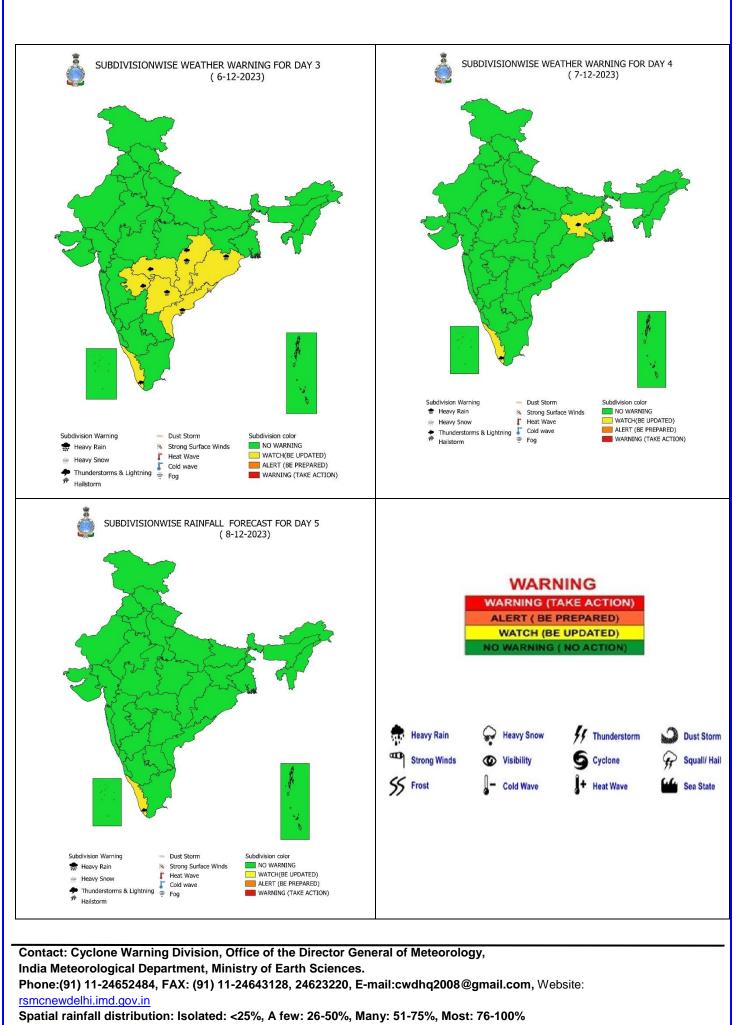


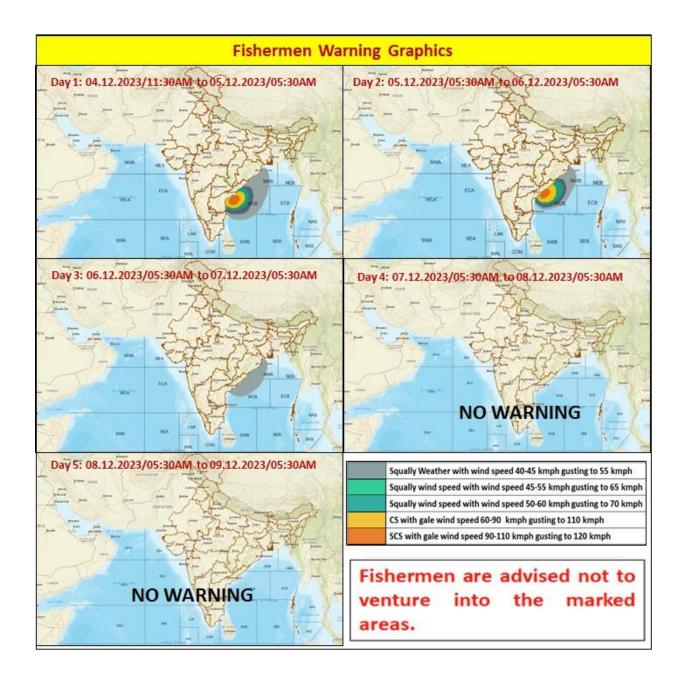
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# **Weather Warning Graphics**

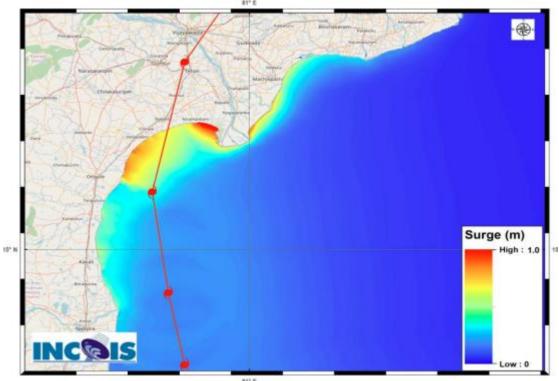


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#### Storm Surge Warning Graphics based on Forecast Track

#### STORM SURGE HEIGHT INFORMATION:

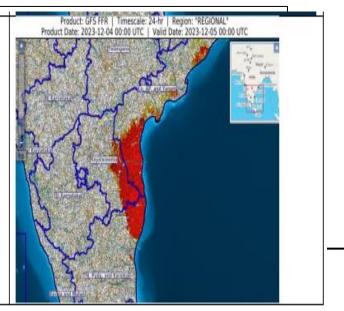
\* The below listed surge heights are over and above astronomical tide.

MANDAL/TALUK	DISTRICT	STATE/UNION TERRITORY	NEARESTPLACE OF HABITATION	STORM SURGE (m)	EXPECTED INUNDATION EXTENT (km)
Repalle	Guntur	Andhra Pradesh	Repalle	0.4-1.0	Upto 0.25
Avanigadda	Krishna	Andhra Pradesh	Ramakrishnapuram	0.3-0.8	Upto 0.20
Machilipatnam	Krishna	Andhra Pradesh	Perupalem	0.2-0.8	Upto 0.15
Chirala	Prakasam	Andhra Pradesh	Kotha Peta(Rural)	0.4-0.6	Upto 0.12
Kovvur	Nellore	Andhra Pradesh	Isakapalle	0.3-0.5	Nill
Ongole	Prakasam	Andhra Pradesh	Kanuparthi	0.2-0.5	Upto 0.13
Sullurpeta	Nellore	Andhra Pradesh	Pudilayadoruvu	0.2-0.6	Upto 0.18

# Flash Flood Guidance

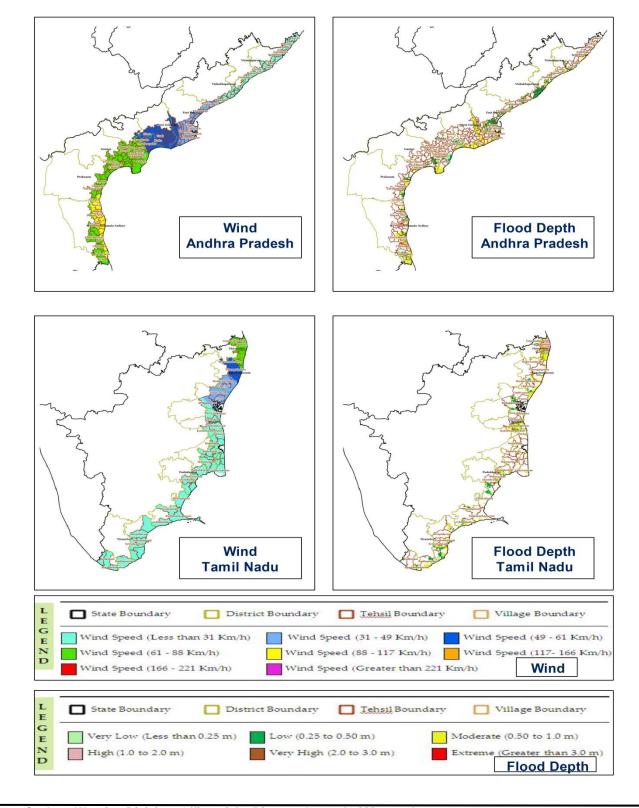
# 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 05-12-2023 :

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of Coastal AP & Yanam and adjoining part of Rayalaseema Met Sub-divisions during next 24 hours.



Contact: Cyc India Meteor Phone:(91) 1 rsmcnewdelh-

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100% Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more. Hazard Map with Severe Cyclonic Storm MICHAUNG over Westcentral & adjoining Southwest Bay of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts



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# Realized weather during past 24 hours till 0830 hours IST of today (04.12.2023):

- Heavy to very heavy rainfall with isolated extremely heavy rainfall reported over Tamil Nadu and isolated heavy to very heavy rainfall reported over Rayalaseema and Coastal Andhra Pradesh.
- Significant Rainfall Amount (in cm):
- TAMILNADU, PUDUCHERRY & KARAIKAL: Chennai Zone 14 and Perungudi (dist Chennai) 29, Avadi (dist Tiruvallur) 28, Alandur (dist Chennai), Chennai (AP) (dist Chennai) 25 each, Zone 13 Adyar (dist Chennai), Meenambakkam AWS (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Chennai (N) (dist Chennai), Puzhal ARG (dist Tiruvallur), Cholavaram (dist Tiruvallur) 23 each. Mahabalipuram (dist Chengalpattu), MGR Nagar (dist Chennai), Zone 10 Kodambakkam (dist Chennai), CD Hospital Tondiarpet (dist Chennai) 22 each, Zone 11 Valasaravakkam (dist Chennai), Zone 15 Sholinganallur (dist Chennai), DGP Office (dist Chennai), NIOT Pallikaranai ARG (dist Chennai), Chennai (N) AWS (dist Chennai), Anna University (dist Chennai), Ponneri (dist Tiruvallur) 21 each, Zone 03 Puzhal (dist Chennai), Perambur (dist Chennai), Zone 09 Ice House (dist Chennai), Red Hills (dist Tiruvallur) 20 each, Ayanavaram Taluk Office (dist Chennai), Taramani ARG (dist Chennai), SatyabamaUty ARG (dist Kancheepuram), Anna Nagar (dist Chennai), VIT\_Chennai AWS (dist Chengalpattu) 19 each, Chennai Collector Office (dist Chennai), Sholinganallur (dist Chennai), Zone 09 Teynampet (dist Chennai), Zone 08 Malar Colony (dist Chennai), Ambattur (dist Chennai), Anna University ARG (dist Chennai), Valasaravakkam (dist Chennai), Good Will School Villivakkam ARG (dist Tiruvallur), YMCA Nandnam ARG (dist Chennai), KVK Kattukuppam AWS (dist Kancheepuram), Thamaraipakkam (dist Tiruvallur), Kodambakkam (dist Chennai) 18 each, Gummidipoondi (dist Tiruvallur), Tambaram (dist Chengalpattu), Ambathur-2 (dist Chennai), Kelambakkam (dist Chengalpattu) 17 each, Zone 06 T.V.K Nagar (dist Chennai), Zone 04 Tondiarpet (dist Chennai), Chembarapakkam\_Rev (dist Kancheepuram), Teynampet (dist Chennai), Tiruvallur (dist Tiruvallur), Zone 01 Kathivakkam (dist Chennai), Thiru-Vi-Ka Nagar (dist Chennai), Zone 03 Madhavaram (dist Chennai) 16 each, Uthukottai (dist Tiruvallur), Zone 08 Anna Nagar (dist Chennai), Sholinganallur (dist Chennai), Tirur KVK AWS (dist Tiruvallur), Zone 06 D65 Kolathur (dist Chennai), Tondairpet (dist Chennai), Zone 14 U41 Perungudi (dist Chennai), Ennore AWS (dist Chennai) 15 each, Zone 07 Ambattur (dist Chennai), Zone 13 Adyar Eco Park (dist Chennai), Zone 05 GCC (dist Chennai), Poonamallee (dist Tiruvallur), Thirukalukundram (dist Chengalpattu), Zone 12 Alandhur (dist Chennai), Koratur (dist Tiruvallur) 14 each, Sriperumbudur (dist Kancheepuram), Thirupporur (dist Chengalpattu), Zone 02 Manali (dist Chennai), Zone U39 Adyar (dist Chennai), Chembarabakkam\_CMWSSB (dist Kancheepuram) 13 each, Zone D156 Mugalivakkam (dist Chennai), Kundrathur (dist Kancheepuram), Chengalpattu (dist Chengalpattu), Zone 15 Uthandi (dist Chennai), Royapuram

(dist Chennai), Zone 07 U18 D81 Vanagaram (dist Chennai) 12 each, Zone 05 Royapuram (dist Chennai), Zone U32 Maduravoyal (dist Chennai) 11 each, Poondi (dist Tiruvallur), Tiruttani (dist Tiruvallur) 10 each, Thiruvottiyur (dist Chennai), Maduranthagam (dist Chengalpattu), Thiruvalangadu (dist Tiruvallur), Kancheepuram (dist Kancheepuram), Uthiramerur (dist Kancheepuram), Cheyyur (dist Chengalpattu) 9 each, Walajabad (dist Kancheepuram), Minnal (dist Ranipet), Arakonam (dist Ranipet), Marakkanam (dist Villupuram) 8 each, Zone 01 Thiruvottiyur (dist Chennai) 7 each

- **COASTAL ANDHRA PRADESH**: Nellore (dist Spsr Nellore) 19
- **<u>RAYLASEEMA</u>**:Sullurpeta (dist Tirupati) 20, Tada (dist Tirupati) 19, Gudur (dist Tirupati) 14, Srikalahasti (dist Tirupati) 13, Thottambedu (dist Tirupati) 13, Satyavedu (dist Tirupati) 13, Nagari (dist Chittoor) 12, Tirupati Aero (dist Tirupati) 7