



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

Press Release

Date: 03rd December, 2023

Time of Issue: 1330 hours IST

Subject: The Cyclonic Storm “MICHAUNG” over Southwest Bay of Bengal is likely to cross South Andhra Pradesh coast between Nellore and Machilipatnam during forenoon of 5th December as a Severe Cyclonic Storm with a maximum sustained wind speed of 90-100 kmph gusting to 110 kmph.

Realized weather during past 24 hours till 0830 hours IST of today: (Refer Annexure I)

A. Cyclonic Storm “MICHAUNG” over Southwest Bay of Bengal (graphics in Annexure II)

- ❖ Yesterday's **Deep Depression** over Southwest Bay of Bengal intensified into **Cyclonic Storm “MICHAUNG”** (pronounced as MIGJAUM) at 0530 hours IST of today, the 03rd December over the same region. It moved northwestwards with a speed of 5 kmph during past 06 hours and lay centered at 0830 hours IST of today, the 03rd December, 2023 over the same region near Latitude 11.5°N and Longitude 82.4°E, about 290 km east-southeast of Puducherry, 290 km southeast of Chennai, 420 km southeast of Nellore, 530 km south-southeast of Bapatla and 530 km south-southeast of Machilipatnam.
- ❖ It is likely to continue to move northwestwards, intensify further and reach Westcentral Bay of Bengal off south Andhra Pradesh & adjoining north Tamil Nadu coasts by 4th December forenoon. Thereafter, it would move nearly northwards almost parallel & close to south Andhra Pradesh coast and cross South Andhra Pradesh coast between Nellore and Machilipatnam during forenoon of 5th December as a **Severe Cyclonic Storm** with a maximum sustained wind speed of 90-100 kmph gusting to 110 kmph.

Warnings in association with the above Cyclonic Storm:

(i) Rainfall Warning (graphics in Annexure III):

- **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 3rd & 4th and isolated heavy rainfall on 5th December and decrease thereafter.
- **Coastal Andhra Pradesh:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over south coastal Andhra Pradesh on 3rd and heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4th & 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 to extremely heavy falls is very likely on 3rd & 4th and isolated heavy rainfall on 5th December and decrease thereafter.
- **Telangana:** Light to moderate rainfall at few places with isolated heavy rainfall is likely on 4th & 5th with isolated very heavy rainfall over the same region on 5th December.
- **Odisha:** Light to moderate rainfall at most places with isolated heavy rainfall is likely over south Coastal and adjoining south Interior Odisha during 4th & 6th with isolated very heavy rainfall over the same region on 5th December.

(ii) Wind warning:

- **Southwest Bay of Bengal along & off north Tamil Nadu-Puducherry Coasts:** Gale wind speed reaching 60-70 kmph gusting to 80 kmph is prevailing over Southwest Bay of Bengal. It is likely to gradually increase becoming 70-80 kmph gusting to 90 kmph from 3rd December evening for subsequent 12 hours. It will gradually decrease thereafter.
- **Westcentral Bay of Bengal and along & off south Andhra Pradesh Coast:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing over westcentral Bay of Bengal. It is likely to gradually increase becoming Gale Wind speed reaching 70-80 kmph gusting to 90 kmph from 3rd evening; 80-90 kmph gusting to 100 kmph from 4th morning and 90-100 kmph gusting to 110 kmph from 4th evening to 5th December noon. It would gradually decrease thereafter.
- **Along & off north Andhra Pradesh Coast:** Squally wind speed reaching 45-55 kmph gusting to 65 kmph likely from 4th December evening, likely to gradually increase becoming 55-65 kmph gusting to 75 kmph from 5th 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 4th December evening, 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) Fishermen Warning (graphics attached in Annexure IV): 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.
- Along & off Odisha coast from 4th December evening till 6th December

(iv) 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)

(v) 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.

B. Other Weather Systems and associated Forecast & Warnings during next 5 days: (graphics in Annexure III)

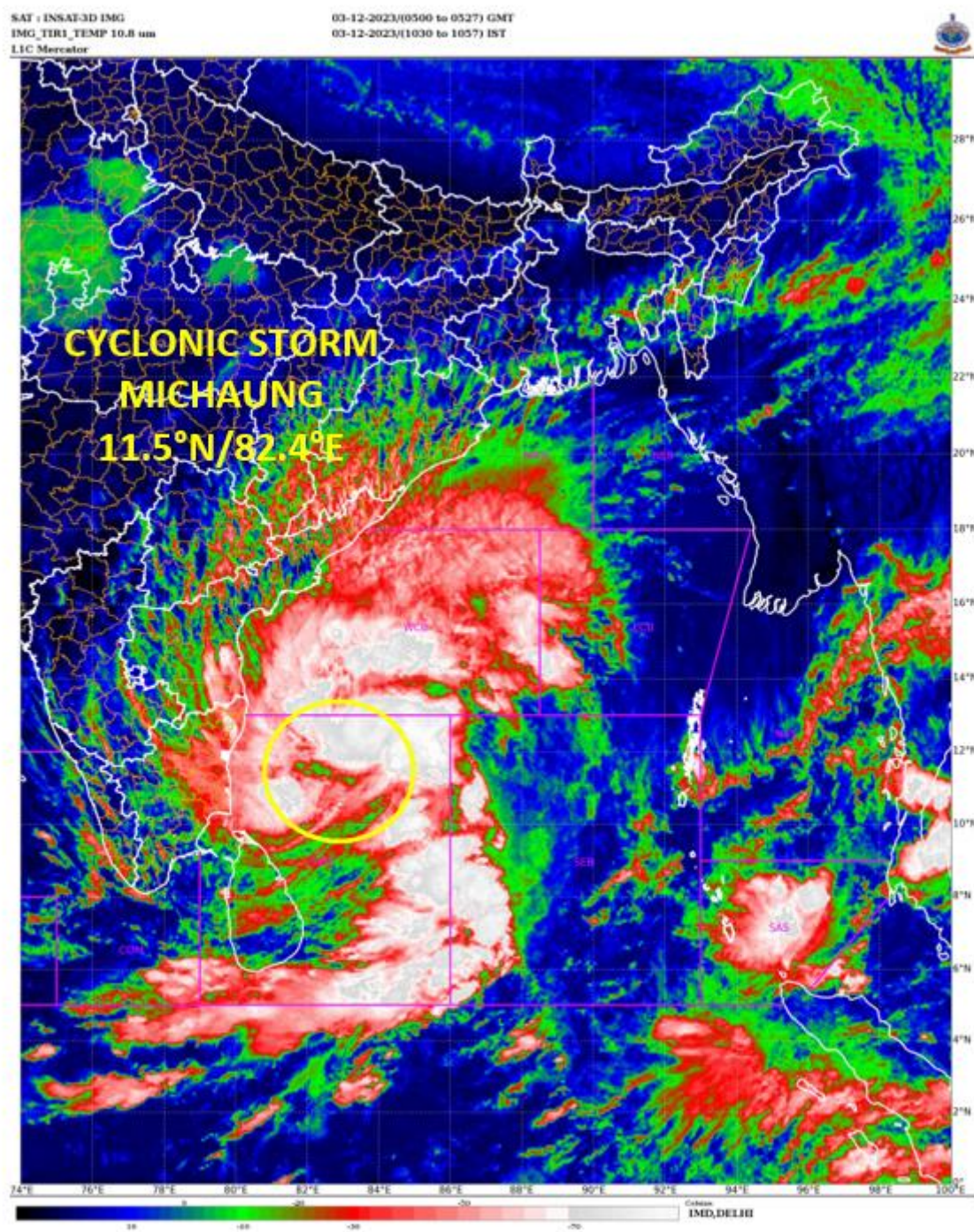
- ❖ A Western Disturbance is seen a Cyclonic Circulation lies over Central Pakistan & neighbourhood in mid-tropospheric levels. It is likely to cause light rainfall/snowfall over Jammu & Kashmir on today, the 3rd December, 2023.
- ❖ Light to moderate rainfall at a few places accompanied with thunderstorm & lightning very likely over East Madhya Pradesh and Vidarbha during 04th-06th December.
- ❖ **Dense fog** during morning hours very likely in isolated pockets over Punjab, Haryana & Chandigarh on 04th & 05th December and over Uttar Pradesh on 05th December.

For more details kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php and <https://mausam.imd.gov.in/responsive/cycloneinformation.php>

Annexure I

Realized weather during past 24 hours till 0830 hours IST of today:

- ❖ **Heavy to very heavy rainfall** reported at isolated places over Tamil Nadu and Rayalaseema and **Heavy rainfall** at isolated places over Kerala and Coastal Andhra Pradesh.
- ❖ **Significant Rainfall Amount:**
 - **Tamil Nadu & Puducherry:** Pallipattu (dist Tiruvallur) 15, Uthukottai (dist Tiruvallur) 13, Thenkasi (dist Tenkasi) 11, Zone 12 Alandhur (dist Chennai), Ponneri (dist Tiruvallur) 10 each, Tiruttani (dist Tiruvallur), Avadi (dist Tiruvallur), Wallajah (dist Ranipet) 9 each, Meenambakkam AWS (dist Chennai), Anna University (dist Chennai), Zone 12 Meenambakkam (dist Chennai), Alandur (dist Chennai), Chennai (AP) (dist Chennai), Zone 14 Perungudi (dist Chennai), Oothu (dist Tirunelveli), Shencottah (dist Tenkasi), Tiruvallur (dist Tiruvallur), Anna University ARG (dist Chennai), Zone 12 D156 Mugalivakkam (dist Chennai), Thamaraipakkam (dist Tiruvallur) 8 each, Zone 11 Valasaravakkam (dist Chennai), Gundar Dam (dist Tenkasi), Zone 10 Kodambakkam (dist Chennai), Zone 14 U41 Perungudi (dist Chennai), Nalumukku (dist Tirunelveli), Cholvaram (dist Tiruvallur), Tambaram (dist Chengalpattu), Zone 13 U39 Adyar (dist Chennai), Zone 09 Ice House (dist Chennai), Papanasam (dist Tirunelveli), VIT_Chennai AWS (dist Chengalpattu), MGR Nagar (dist Chennai), Zone 09 Teynampet (dist Chennai), Kakkachi (dist Tirunelveli) 7 each
 - **Rayalaseema:** Thottambedu (dist Tirupati) 15, Srikalahasti (dist Tirupati) 14, Tirupati Aero (dist Tirupati) 13, Satyavedu (dist Tirupati) 10, Nagari (dist Chittoor) 9, Tada (dist Tirupati) 9, Sullurpeta (dist Tirupati) 8, Gudur (dist Tirupati) 8
 - **Kerala:** Alapuzha (dist Alapuzha) 9
 - **Coastal Andhra Pradesh:** Nellore (dist Spsr Nellore) 7





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH CYCLONIC STORM "MICHAUNG" OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 03RD DECEMBER 2023.



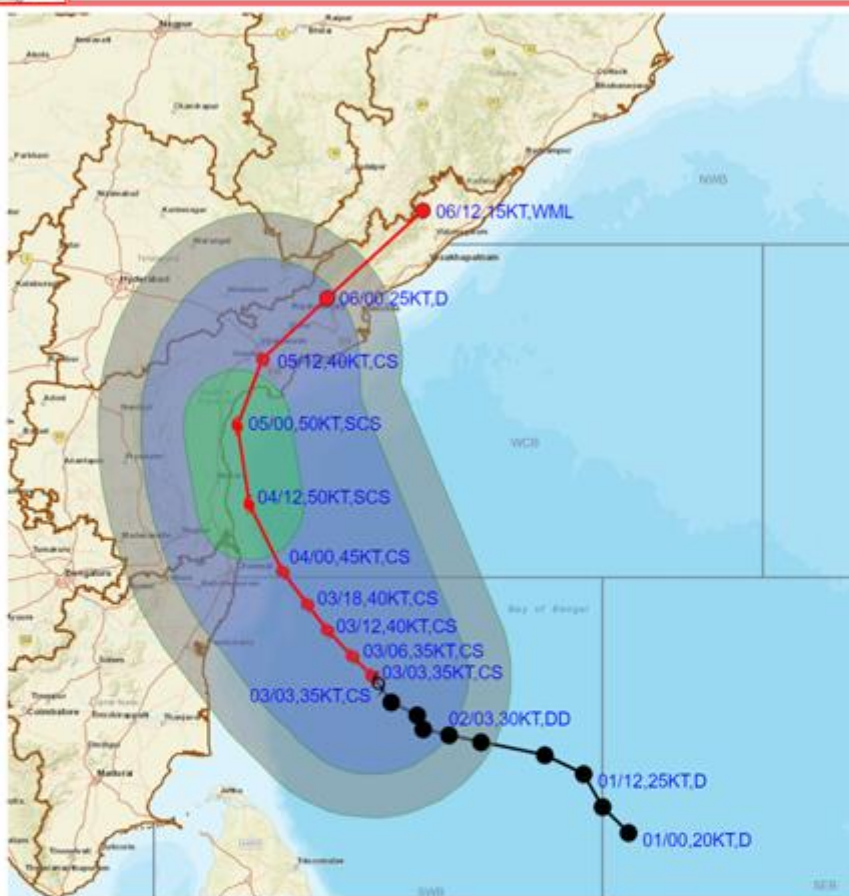
DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63 KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT
● 34-47 KT
● ≥ 48 KT
— OBSERVED TRACK
— FORECAST TRACK
▲ CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS				
Date and Time (UTC)	MO PONDICHERRY	CHENNAI/MINAMBAKKAM	NELLORE	BAPATLA	MACHILIPATNAM/ FRANCHIPET
03.12.23/0300	280, E	290, SE	420, SE	530, SSE	540, SSE
04.12.23/0000	190, NE	90, E	180, SE	310, S	340, S
05.12.23/0000	380, N	260, N	110, NNE	70, SSW	130, SW
06.12.23/0000	620, NNE	500, NNE	360, NNE	200, NE	130, NNE



OBSERVED & FORECAST TRACK, MAXIMUM SUSTAINED WIND AND QUADRANT WIND IN ASSOCIATION WITH CYCLONIC STORM "MICHAUNG" OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 03RD 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 (48-63 KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

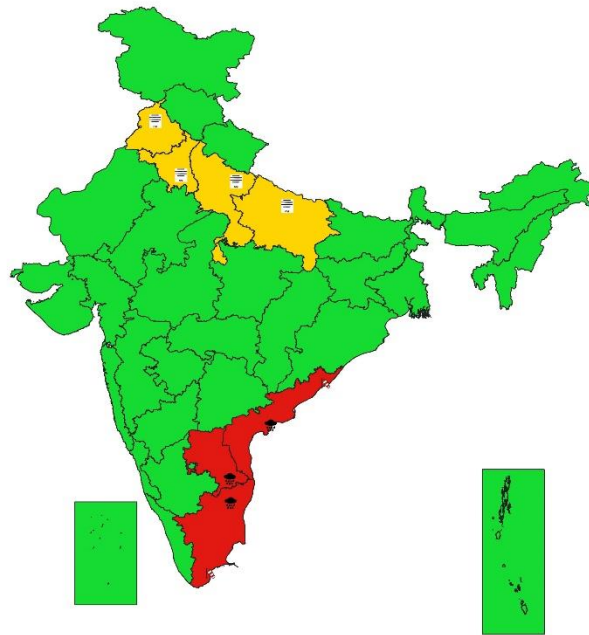
● LESS THAN 34 KT
○ 34-47 KT
● ≥ 48 KT
— OBSERVED TRACK
— FORECAST TRACK
CONE OF UNCERTAINTY
AREA OF MAXIMUM SUSTAINED WIND SPEED:
28-33 KT (52-61 KMPH)
34-49 KT (62-91 KMPH)
50-63 KT (92-117 KMPH)
≥ 64 KT (≥ 118 KMPH)

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



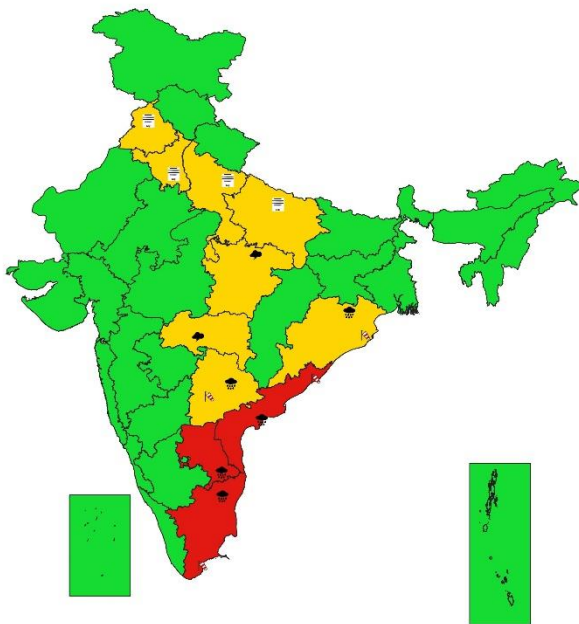
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1
(3-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



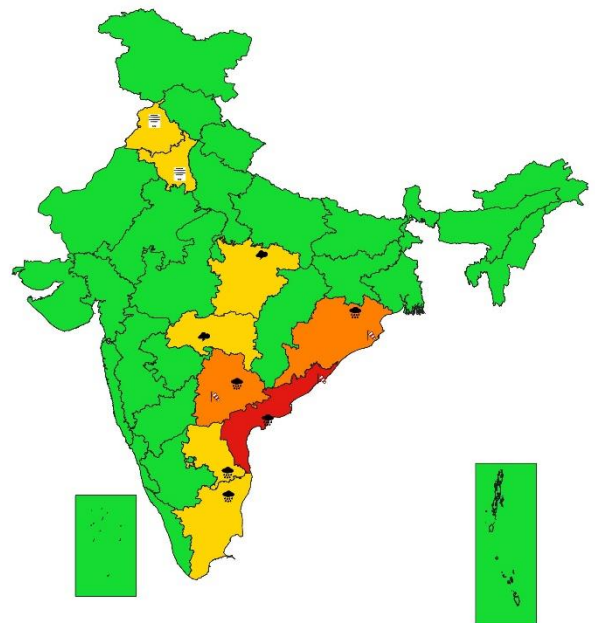
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
(4-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



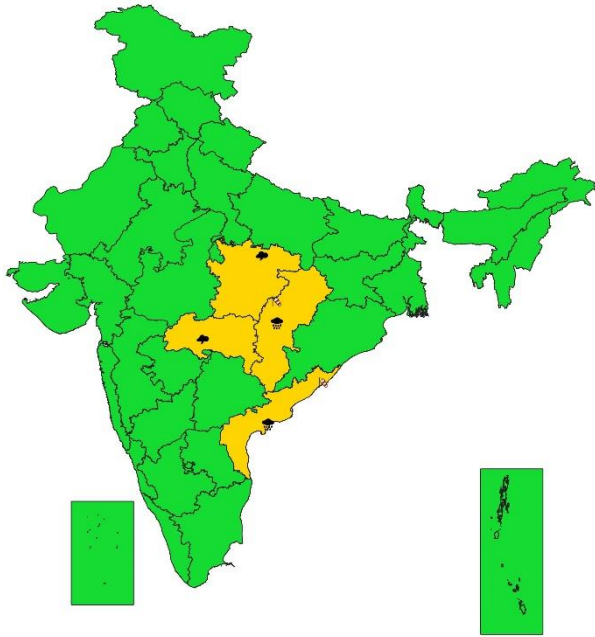
SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
(5-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



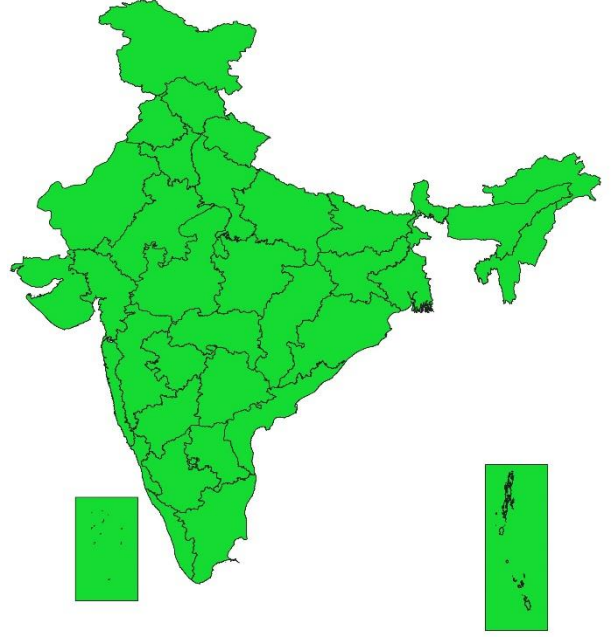
SUBDIVISIONWISE WEATHER WARNING FOR DAY 4 (6-12-2023)



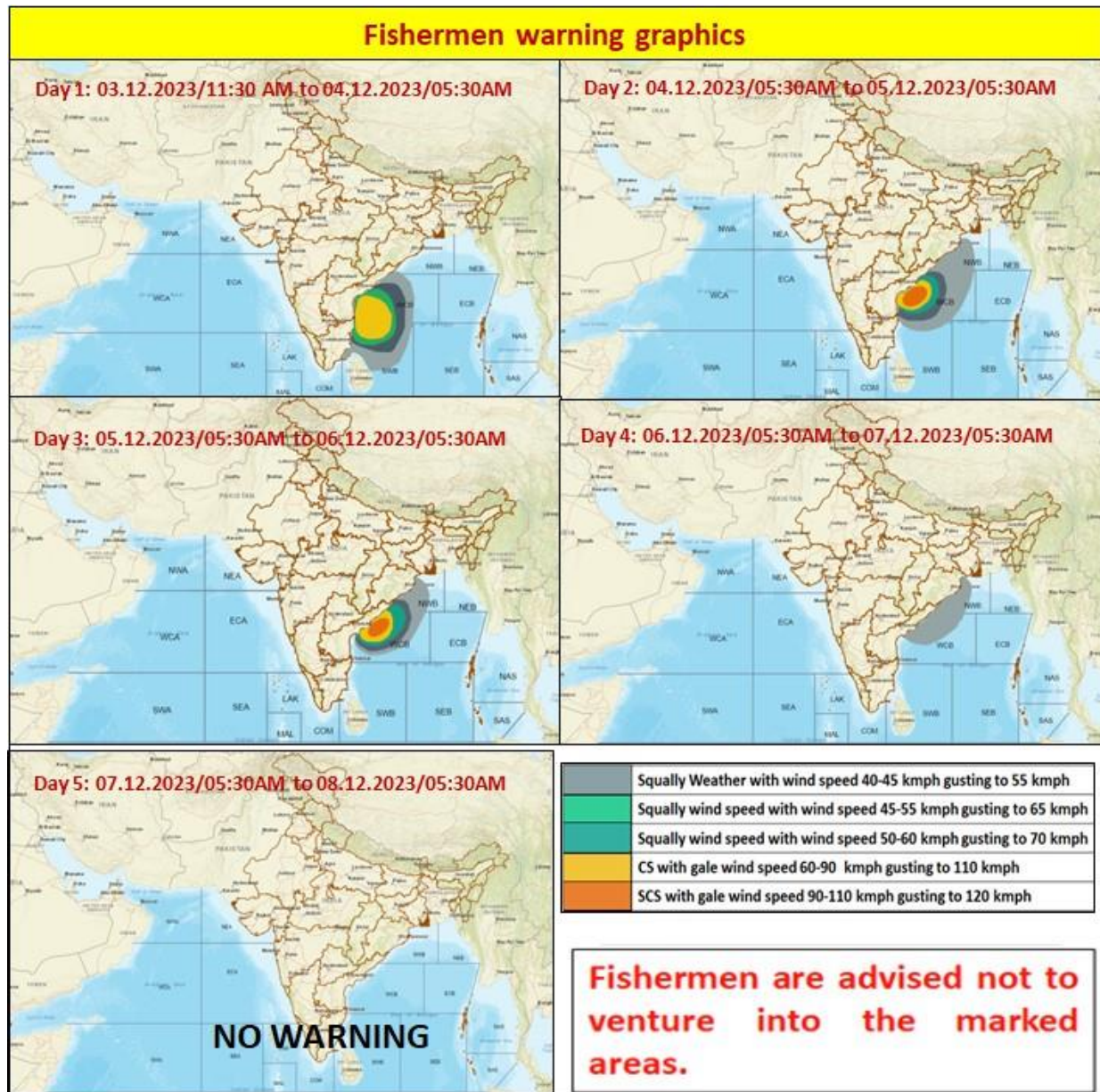
- | | | |
|----------------------------|----------------------|--------------------------|
| Subdivision Warning | Dust Storm | Subdivision color |
| Heavy Rain | Strong Surface Winds | NO WARNING |
| Heavy Snow | Heat Wave | WATCH (BE UPDATED) |
| Thunderstorms & Lightning | Cold wave | ALERT (BE PREPARED)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



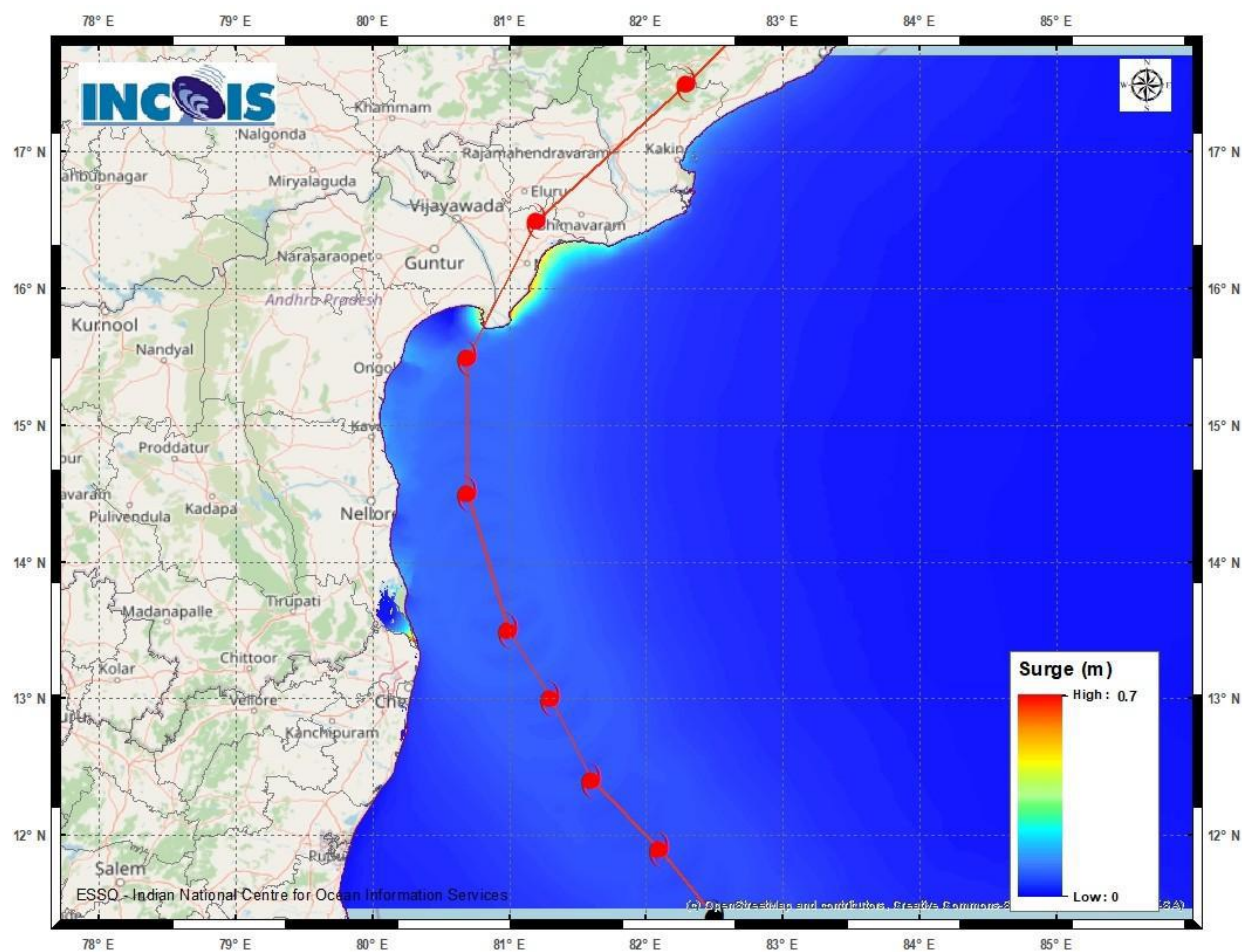
SUBDIVISIONWISE WEATHER WARNING FOR DAY 5 (7-12-2023)



- | | | |
|----------------------------|----------------------|--------------------------|
| 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) |



Storm Surge Warning Graphics based on Forecast Track



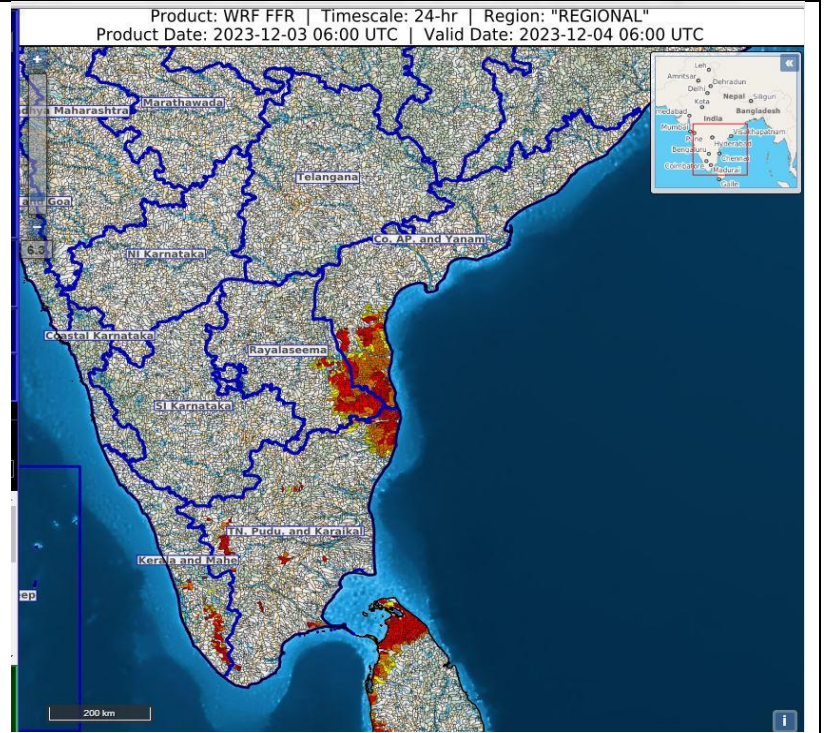
STORM SURGE HEIGHT INFORMATION:

* 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)
Avanigadda	Krishna	Andhra Pradesh	Ramakrishnapuram	0.2-0.7	Upto 0.16
Machilipatnam	Krishna	Andhra Pradesh	Perupalem	0.3-0.7	Upto 0.17
Ponneri	Thiruvallur	Tamil Nadu	Karimanal	0.2-0.6	Upto 0.15
Repalle	Guntur	Andhra Pradesh	Repalle	0.3-0.5	Upto 0.25

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 04-12-2023:














Moderate Flash flood risk likely in next 24 hours over Southern part of Costal AP and Yanam and adjoining area of South-East part of Rayalaseema and Northern part Tamil Nadu - Pudu & Karaikal Met subdivisions.




Legends:

- ❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation
- ❖ **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, Tamil Nadu, 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

Flash Flood Risk	
	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)