



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

**Press Release  
Date: 02<sup>nd</sup> December, 2023  
Time of Issue: 1330 hours IST**

**Subject:**

- I. The Deep Depression over Southwest Bay of Bengal likely to intensify gradually into a Cyclonic Storm over Southwest Bay of Bengal around 03<sup>rd</sup> December and cross South Andhra Pradesh coasts between Nellore and Machilipatnam during forenoon of 5<sup>th</sup> December as a Cyclonic Storm.**

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

**Weather Systems and Forecast & Warnings during next 5 days: (graphics in Annexure II)**

- ❖ A **cyclonic circulation** over Northeast Arabian Sea in lower tropospheric levels.
- ❖ A **trough** runs from cyclonic circulation over Northeast Arabian Sea to Northeast Madhya Pradesh in lower tropospheric levels.
- ❖ **Under the influence of the above systems:**
  - Light to moderate rainfall at a few places accompanied with thunderstorm & lightning very likely over Madhya Pradesh and north Madhya Maharashtra on 02<sup>nd</sup> December.
  - **Dense fog** very likely in isolated pockets over Punjab, Haryana, Uttar Pradesh & North Rajasthan during morning hours of 2<sup>nd</sup> & 3<sup>rd</sup> December, 2023.

**Depression over Southeast & adjoining Southwest Bay of Bengal (graphics in Annexure III)**

- ❖ Yesterday's **Depression** over Southeast & adjoining Southwest Bay of Bengal intensified into deep depression over Southwest Bay of Bengal and moved west-northwestwards with a speed of 18 kmph during past 06 hours and lay centered at 0830 hours IST of today, the 2<sup>nd</sup> December, 2023 over the same region near Latitude 10.6°N and Longitude 83.6°E, about 440 km east-southeast of Puducherry, 450 km east-southeast of Chennai, 580 km south-southeast of Nellore, 670 km south-southeast of Bapatla and 670 km south-southeast of Machilipatnam.
- ❖ It is likely to move west-northwestwards, intensify into a Cyclonic Storm over Southwest Bay of Bengal during next 24 hours. Thereafter, it would move northwestwards and reach westcentral Bay of Bengal off south Andhra Pradesh and adjoining north Tamilnadu coasts by 4th December forenoon. Thereafter, it would move nearly northwards almost parallel and close to south Andhra Pradesh coasts and cross South Andhra Pradesh coasts between Nellore and Machilipatnam during forenoon of 5th December as a Cyclonic Storm with a maximum sustained wind speed of 80-90 kmph gusting to 100 kmph.

**Warnings in association with the above Depression:**

**(i) Rainfall Warning :**

- **North Coastal Tamil Nadu & Puducherry:** Light to moderate rainfall at most places with isolated heavy rainfall is very likely on 2<sup>nd</sup> December and heavy to very heavy rainfall at a few places on 3<sup>rd</sup> Dec. and isolated heavy rainfall on 4<sup>th</sup> December and decrease thereafter.

- **Coastal Andhra Pradesh:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places over south coastal Andhra Pradesh on 3<sup>rd</sup> and heavy to very heavy rainfall with extremely heavy falls at isolated places over coastal Andhra Pradesh & Yanam on 4<sup>th</sup> & 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 most places with **isolated heavy rainfall during 2<sup>nd</sup>-4<sup>th</sup> and very heavy rainfall at isolated places** on 3<sup>rd</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> and **isolated 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:**

**Squally wind** speed reaching **50-60 kmph gusting to 70 kmph** is prevailing over Southwest Bay of Bengal. It is likely to gradually increase becoming **Gale Wind** speed reaching **60-70 kmph gusting to 80 kmph** from 2<sup>nd</sup> December night and **70-80 kmph gusting to 90 kmph** from 3<sup>rd</sup> evening and **80-90 kmph gusting to 100 kmph** from 4<sup>th</sup> evening for subsequent 12 hours.

- **Southeast Bay of Bengal:**

**Squally weather** with wind speed reaching **45-55 kmph gusting to 65 kmph** is prevailing over Southeast Bay of Bengal during next 24 hours and likely to decrease thereafter.

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

**Squally wind** speed reaching **35-45 kmph gusting to 55 kmph** is likely to prevail over westcentral Bay of Bengal from 2<sup>nd</sup> December evening. It is likely to gradually increase becoming **55-65 kmph gusting to 75 kmph** from 3<sup>rd</sup> December morning. It is likely to increase further becoming **Gale Wind** speed reaching **70-80 kmph gusting to 90 kmph from 3<sup>rd</sup> evening and 80-90 kmph gusting to 100 kmph** from 4<sup>th</sup> evening for subsequent 12 hours. It would gradually decrease thereafter.

- **Along & off north Andhra Pradesh Coast:**

**Squally wind** speed reaching **45-55 kmph gusting to 65 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 evening for subsequent 12 hours. It would gradually decrease thereafter.

- **Along & off South 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.

**(iii) Sea Condition:**

- **Southeast Bay of Bengal:**

**Rough to very Rough** Sea condition is likely over Southeast Bay of Bengal on 2<sup>nd</sup> December and would improve thereafter.

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

**Rough to Very Rough sea condition** is prevailing over the region. It is likely to become **very rough to high** from 3<sup>rd</sup> December morning for subsequent 24 hours and improve thereafter gradually.

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

**Rough to Very Rough to sea condition** is likely from 2<sup>nd</sup> December evening, becoming **very rough to high** from 3<sup>rd</sup> December morning till 5<sup>th</sup> December.

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

**Rough to Very Rough to sea condition** is likely from 4<sup>th</sup> December evening till 5<sup>th</sup> December.

- **Along & off South Odisha Coast:**

**Rough to Very Rough to sea condition** is likely from 4<sup>th</sup> December evening till 5<sup>th</sup> December.

**(iv) Fishermen Warning (Annexure IV):**

Fishermen are advised not to venture into:

- Southeast Bay of Bengal on 2<sup>nd</sup> December.
- Southwest Bay of Bengal and along & off North Tamil Nadu-Puducherry Coasts during 2<sup>nd</sup> to 4<sup>th</sup> December.
- Westcentral Bay of Bengal and along & off Andhra Pradesh Coast from 2<sup>nd</sup> December morning to 5<sup>th</sup> December.
- Along & off South Odisha coast from 4<sup>th</sup> December evening till 5<sup>th</sup> December

The Fishermen out at sea are advised to return to coast during next 12 hours.

**(v) Storm Surge (Annexure V):**

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

For more details kindly refer: [https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php) and <https://mausam.imd.gov.in/responsive/cycloneinformation.php>

**Impact expected in association with the likely formation the Cyclonic storm: over coastal districts of South Andhra Pradesh during 03<sup>rd</sup> to 05<sup>th</sup> December and adjoining coastal districts of North Tamil Nadu-Puducherry on 03<sup>rd</sup> and 04<sup>th</sup> December 2023:**

**(vi) Damage Expected**

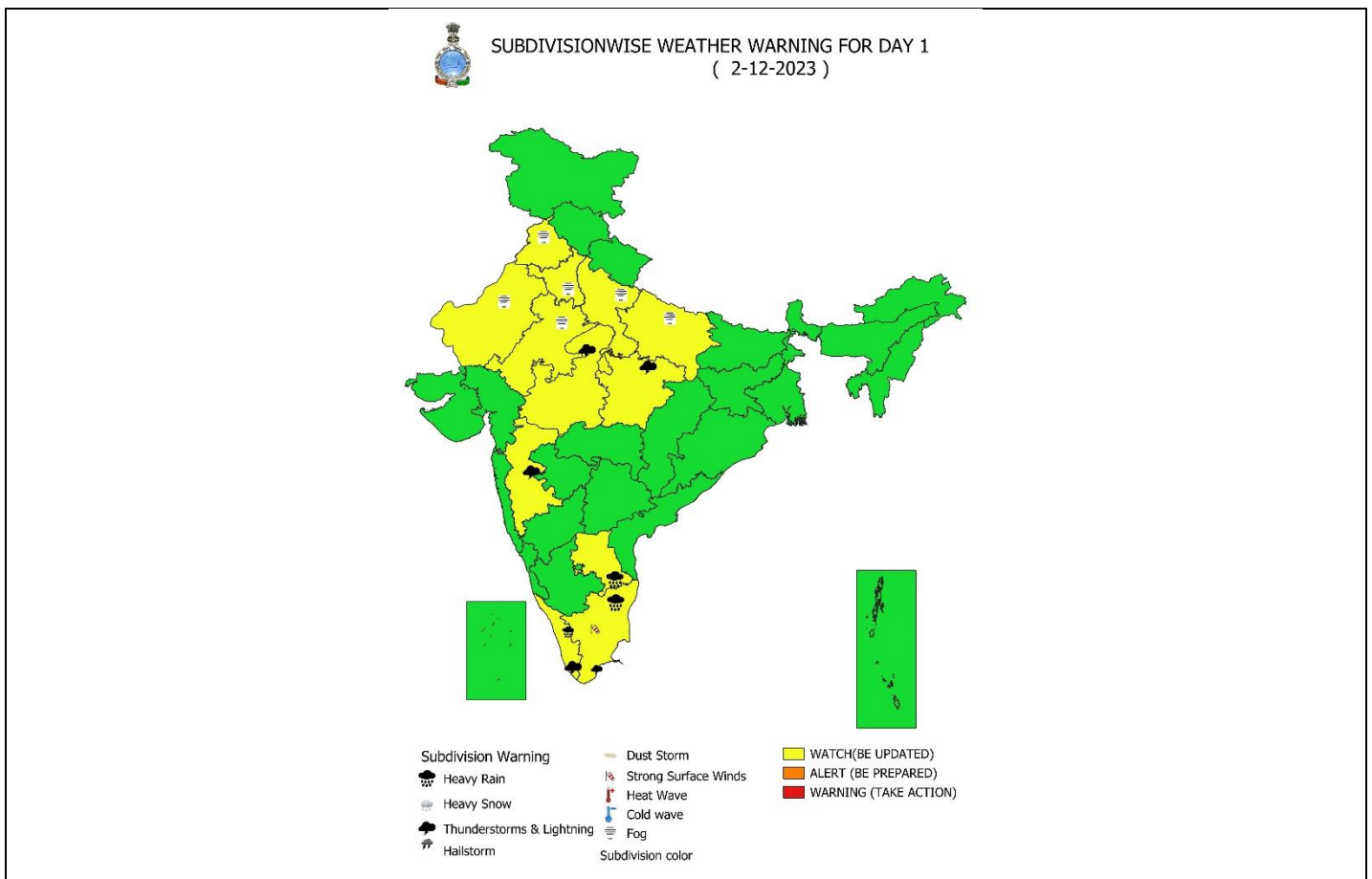
- Damage to thatched huts.
- Possibilities of damage to vulnerable structure.
- Breaking of tree branches and uprooting of small & medium sized trees.
- Minor damage to power and communication lines due to breaking of branches and uprooting of trees.
- Major damage to Kutcha and minor damage to Pucca 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)

**(vii) Action Suggested:**

- Total suspension of fishing operations.
- Fishermen out at sea are advised to return to coast by 1st December
- 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.

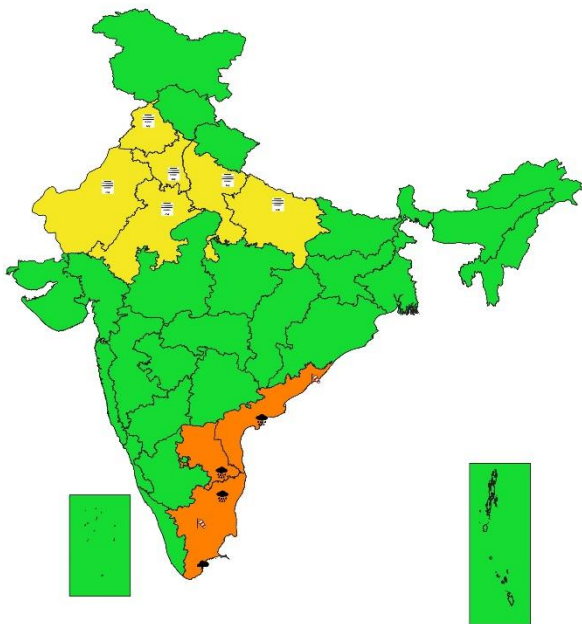
**Realized weather during past 24 hours till 0830 hours IST of today:**

- ❖ **Heavy rainfall** reported at isolated places over Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Significant Rainfall Amount:**
  - KERALA & MAHE: Palode Aws (dist Thiruvananthapuram) 7, Pirappancode Aws (dist Thiruvananthapuram) 7, Konni (dist Pathanamthitta) 7,
  - TAMILNADU: Kannadaian Anaicut (Tirunelveli)-8; Kodayakarai (Nagapattinam)-7





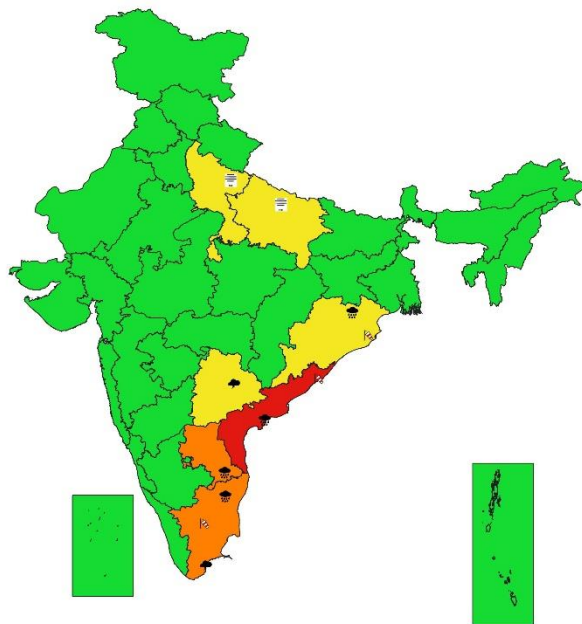
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
( 3-12-2023)**



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <b>Subdivision Warning</b> | Dust Storm           | <b>Subdivision color</b> |
| 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)    |



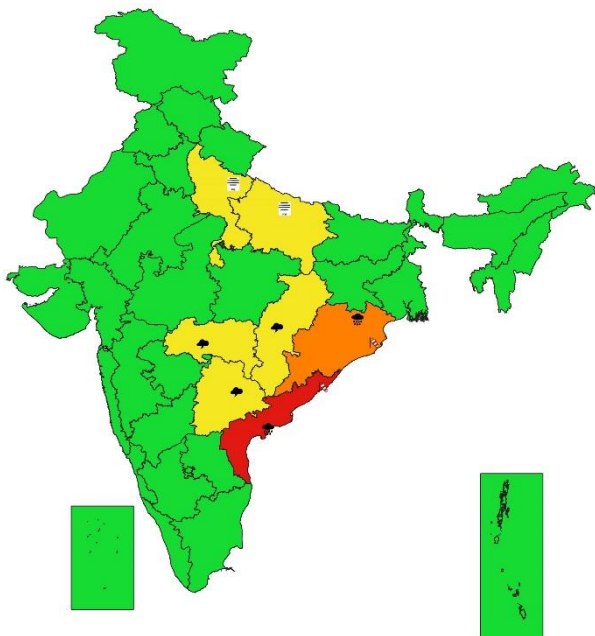
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
( 4-12-2023)**



- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <b>Subdivision Warning</b> | Dust Storm           | <b>Subdivision color</b> |
| 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)    |



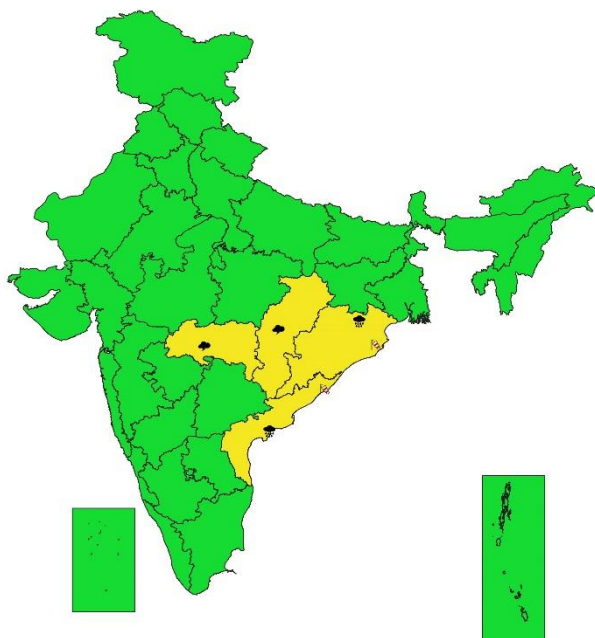
**SUBDIVISIONWISE WEATHER WARNING FOR DAY 4  
( 5-12-2023)**



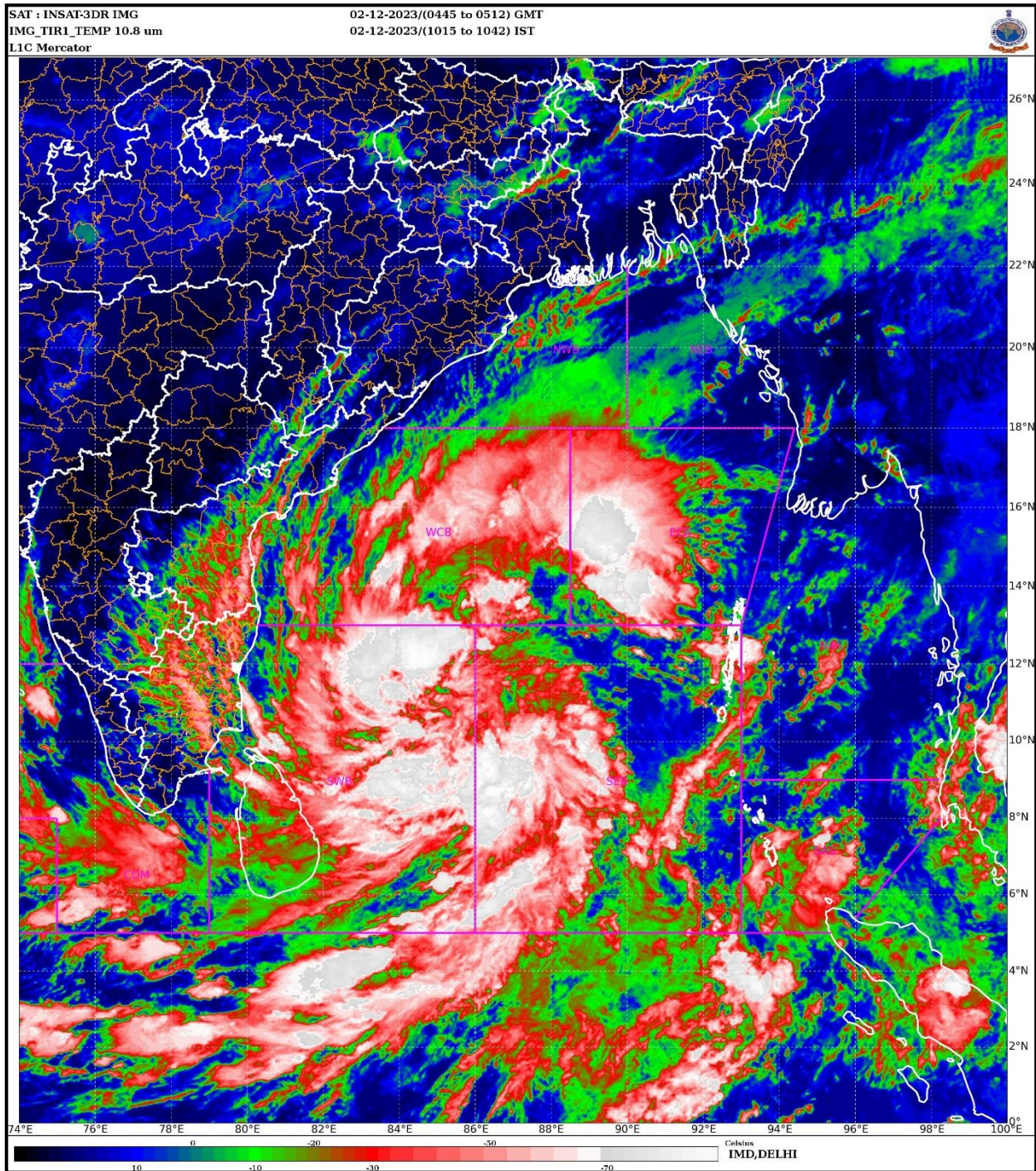
- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <b>Subdivision Warning</b> | Dust Storm           | <b>Subdivision color</b> |
| Heavy Rain                 | Strong Surface Winds | NO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



**SUBDIVISIONWISE RAINFALL FORECAST FOR DAY 5  
( 6-12-2023)**

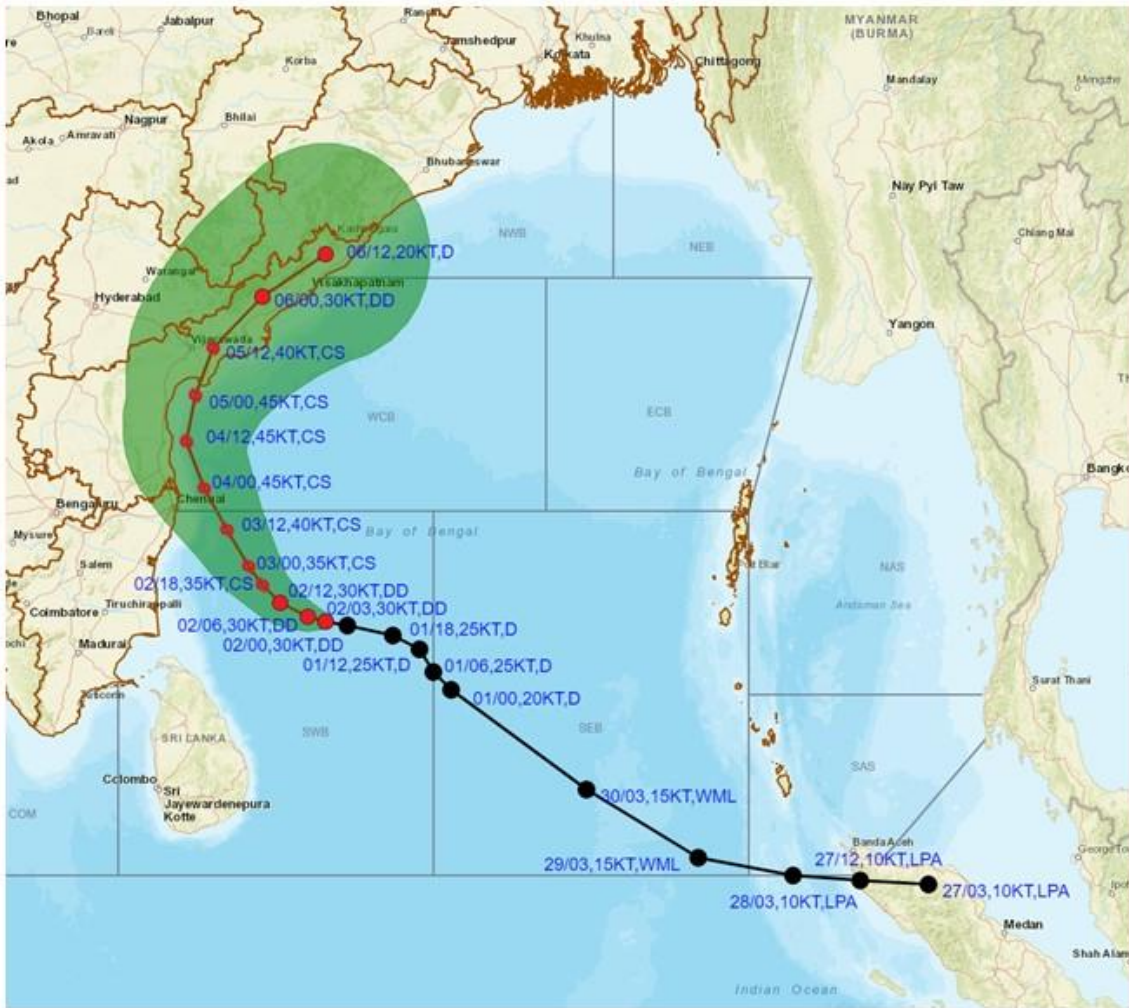


- |                            |                      |                          |
|----------------------------|----------------------|--------------------------|
| <b>Subdivision Warning</b> | Dust Storm           | <b>Subdivision color</b> |
| Heavy Rain                 | Strong Surface Winds | NO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





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 02<sup>ND</sup> DECEMBER 2023.**



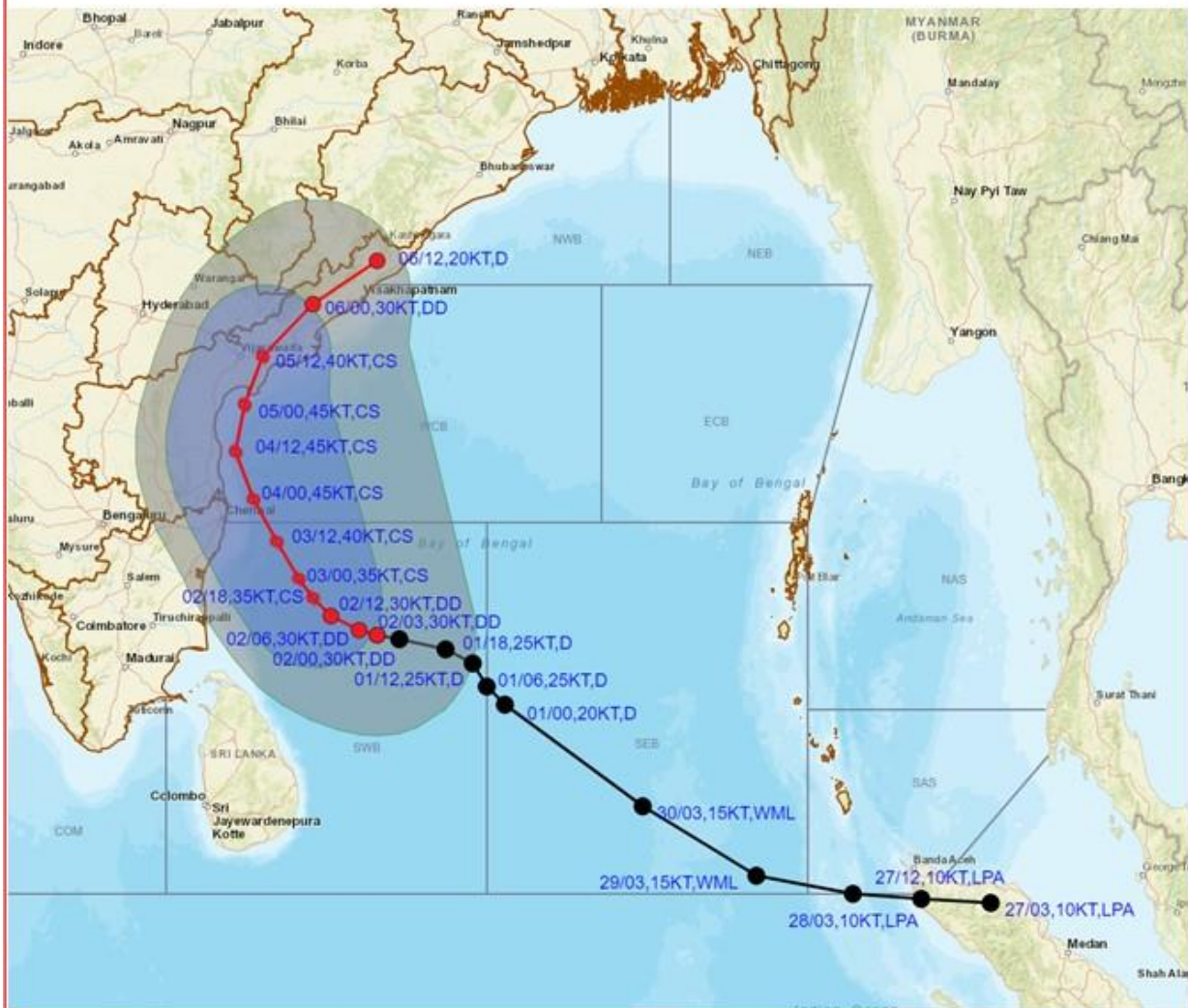
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE 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				
	MO PONDICHERRY	CHENNAI/MINAMBAKKAM	NELLORE	BAPATLA	MACHILIPATNAM/ FRANCHPET
02.12.23/0300	440, ESE	450, SE	580, SE	680, SSE	670, SSE
03.12.23/0000	220, E	220, SE	360, SE	480, SSE	490, S
04.12.23/0000	210, NE	100, NE	140, SE	270, S	300, S
05.12.23/0000	410, NNE	290, NNE	150, NNE	60, SSE	100, SSW
06.12.23/0000	680, NNE	560, NNE	430, NE	270, NE	200, NE



**OBSERVED AND FORECAST TRACK ALONG WITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 IST) OF 02<sup>ND</sup> 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)

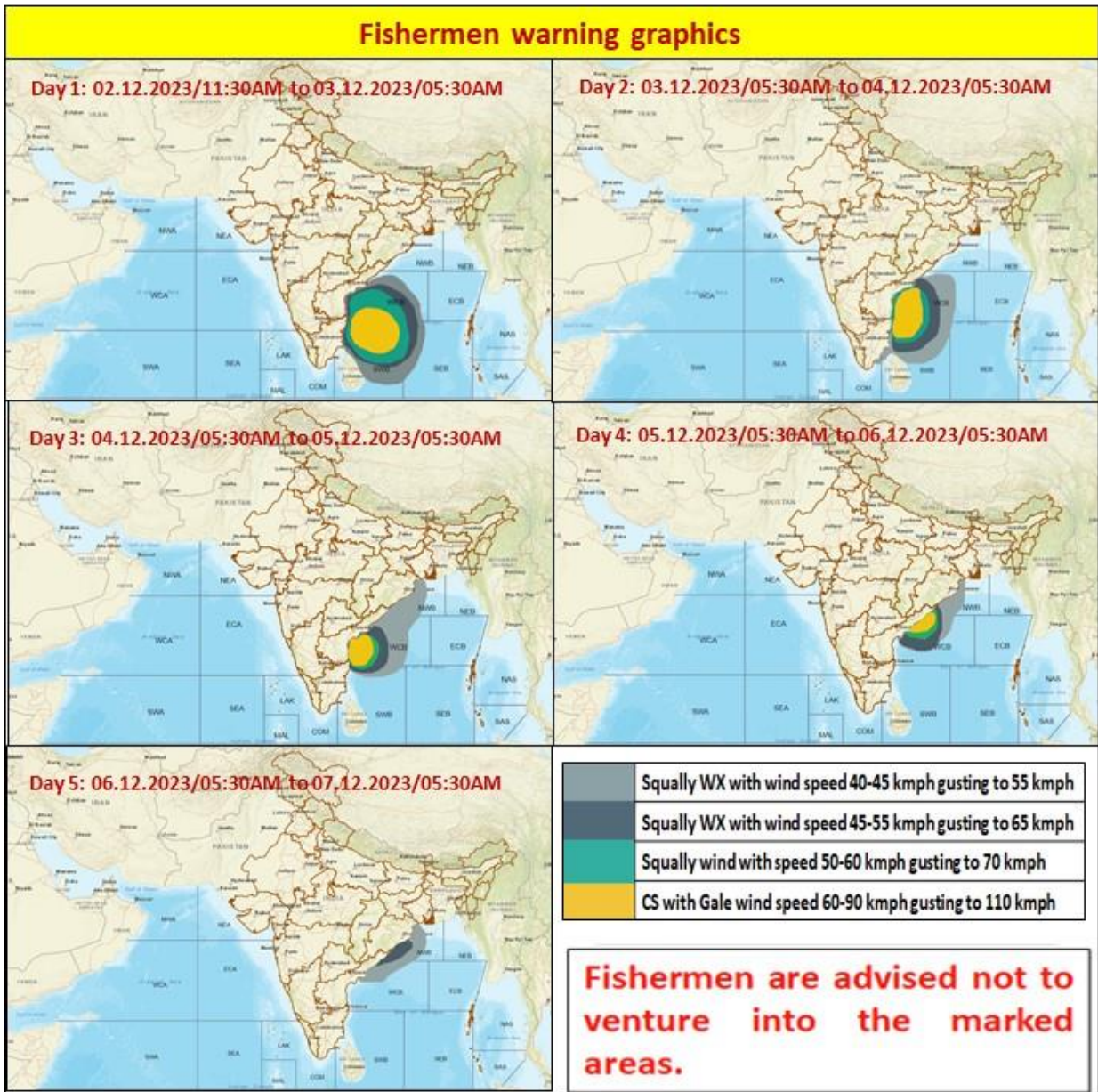
■ 50-63 KT (92-117 KMPH)

■ ≥ 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





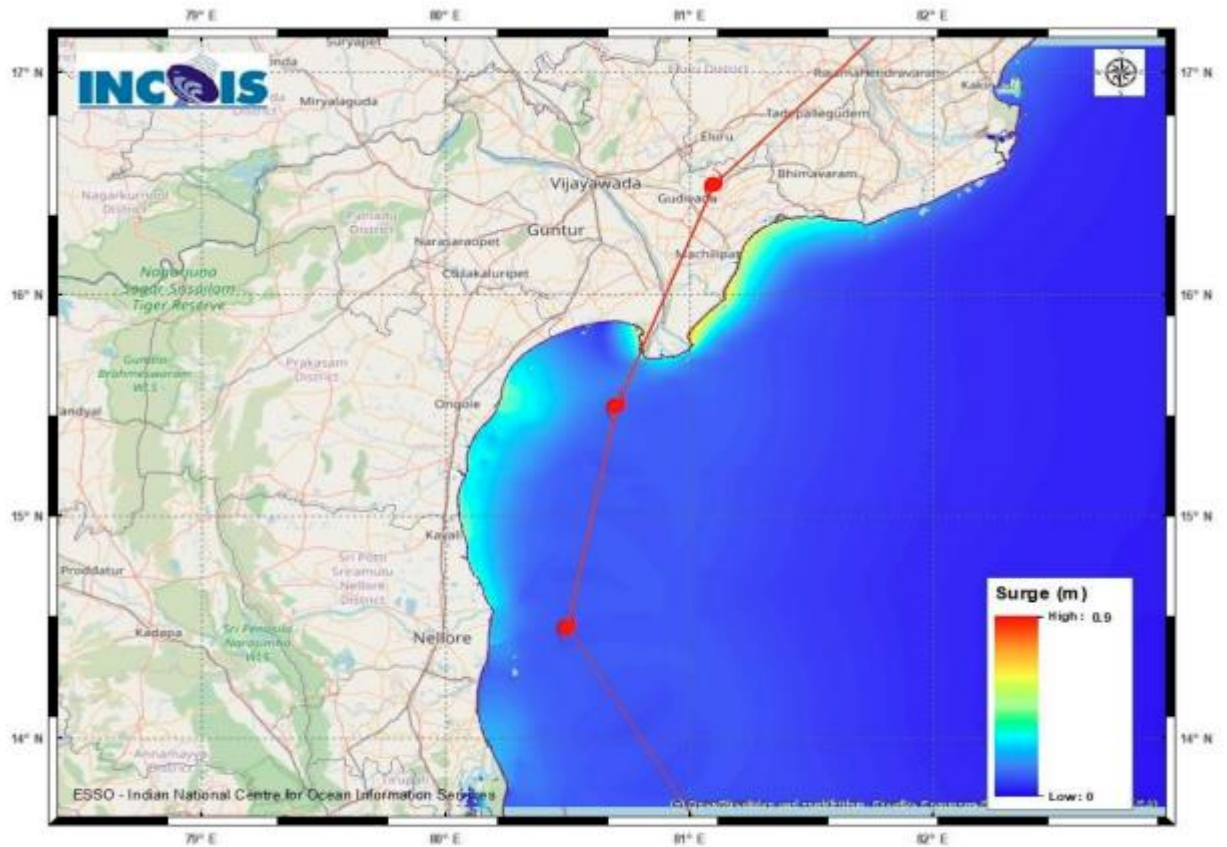


Figure: Storm Surge Map

**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	0.3-0.8	Upto 0.10
Machilipatnam	Krishna	Andhra Pradesh	Chinagollapalem	0.4-0.9	Upto 0.49
Repalle	Guntur	Andhra Pradesh		0.2-0.5	Upto 0.34

**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)